```
<220>
<221> SITE
<222> (961)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (963)
<223> n equals a,t,g, or c
<400> 845
cctggaaaag cgcctcctcc gccgctcccg ctcgggggac gtgctggcca agaaccctgt
                                                                      60
ggtgcgctcc aagagctaca acacgcctct gctgaacccc gtgcaggagc acaggcggag
                                                                     120
ggcgcggcgg ccggcggtac cagcatccgc agcactctgt gtcggagatg acgtcctgcc
                                                                     180
ccgagcctca gggcttctcc gacccgcccg gccagggccc caccggggac cttcaggtct
                                                                     240
keeeeggege eccaetearg geeetgeeee ageagaetgt acceeaegae eeageeeeet
                                                                     300
gagcagggct tggatcccac ccgcagctcc ctgccccgct ccagcccgga gaacctggtg
                                                                     360
gaccagatcc tggagtccgt ggactcggat tctgaaggga ttttcattga ctttggccgg
                                                                     420
ggccggggct ctggcatgtc cgacttggag ggctctgggg gccggcagag tgtcgtgtga
                                                                     480
ggcctcacag ctggccttga gtttttactg acacgtccct gtgtgcgggg gtgtccatgt
                                                                     540
600
tcactggcct tggtcacttt gtatttctgt cttggttgga aataccatca gccttccttg
                                                                     660
ctcggcccag gtctgtttca ggcatctgag tcggcgttta cccaggggcc gggccagaga
                                                                     720
egggggtegg eegetegete ecaegeteet cetgeeeeag ecetetggtg tecaeacetg
                                                                     780
cccacagaga atgtaaaccc agtgggctct gcccacgccg ggccccaaag tgaccagact
                                                                     840
                                                                     900
ccagcacacc tgtctcctcc tgcctggggt ggccatgggg atggaagggg gtggaataaa
acctgtcaac ctggctcatg tcttgcangt gcctgccctg ggggcgcccc tttcagggtg
                                                                     960
ntnaccct
                                                                     968
<210> 846
<211> 990
<212> DNA
<213> Homo sapiens
<400> 846
ttaagacacg cgtcccaggt gtggatgtgt gggtgcttaa gacagcagac tgctgctttg
                                                                      60
ctgggccagg cctgggttta tttattacaa gcagttcagg aagcacagac atcacgttgt
                                                                     120
tcacttgctt cactgatgaa tgtaataatt gttctcgttc atgccctttg cccctggtgt
                                                                     180
cggggctgtc cacactgggg accattggtg cccccatgat tattagctcc ctgaagcctg
                                                                     240
gtgggtcgtc agggcttctg tccggtgttt aaagacccat cccagacaag cccaaaccac
                                                                    300
ctcagtttga agagacatag agggacaggc agacggggcc tcagagggat ccagcctcat
                                                                    360
ccagcetece ggcaacetea ggagageagg ccagatgggg ceteagaggg atecageete
                                                                     420
atccagecte eeggeaacet eaggetggtt ecetteeagt geegaeteea eagecetget
                                                                     480
ggttcccttc cagtgccgac tcccaggctg agtcgctttg cagcgtttgg gacgtacgca
                                                                     540
gggcctgtgc tgtgggccag ccacttagtg cacttcctga gctcagaaac acgcagtggt
                                                                     600
tcagcactga gtcatgcttg cttctctacg cactgatttg ttctattcca gttttcacgt
                                                                    660
acatcgtttt ggtgacatct ctgcgttatc atttatttat atggagtgta ttttctccaa
                                                                    720
aacttctcta cgagggaatg cacctgctca ttacagctgc tgtctgtgta ttcttcacgg
                                                                    780
caatggatca aaccagactc acacagtctt agactaagct gaacactgga aaaataatac
                                                                    840
atgcttaaag tctgctgtta ttctaaaatg aaagatatga attcaacaaa gttgatggat
                                                                    900
                                                                    960
aactttcttt gactgctcta cctgaattta gactaagcag taaatagttt aataaaagat
cactttaata taaaaaaaaa aaaaaaaaaa
                                                                    990
<210> 847
<211> 968
<212> DNA
<213> Homo sapiens
<400> 847
aaaatgtgca gaaaagggaa catgtgttgc tgtgacttta aaatgttttt tcctgatgaa
                                                                     60
```

```
120
tatatcagaa agtaacatgg cattctcatt tcatgcaggt gcagactact gtactgttgt
                                                                      180
tgcaggctga ctttttcaga gtgagggctc cttgtgggga gctgcgagct gccagcatca
                                                                      240
qqqcaaagcc atggtgactt tgaagccttc ctacttgact tgagtgagat gtggcgagga
                                                                      300
ttctqqqqqc ttaqaqaqqq caqcctqqaq aagccaqaqt taagctcaqa acaaqaqqtq
                                                                      360
caqqaaqaqc cacagcaggg aagggaagag agatcccaga ggaggggcag agtgtggcag
                                                                      420
gacaagggcc ctgccgtaca tgcccaatta cagggcctcg aaagagtcct gtattgttat
                                                                      480
ttttcqtcac tacctccccg ggtcgggagt gggtaatttg cgcgcctgct gccttccttg
                                                                      540
gatgtggtag ccgtttctca ggctccctct ccggaatcga accctgattc cccgtcaccc
                                                                      600
gtggtcacca tggtaggcac ggcgactacc atcgaaagtt gatagggcag acgttcgaat
gggtcgtcgc cgccacgggg ggcgtgcgat cggcccgagg ttatctagag tcaccaaagc
                                                                      660
cgccggcgcc cgcccccgg ccggggccgg agaggggctg accgggttgg ttttgatctg
                                                                      720
ataaatgcac gcatcccccc cgcgaagggg gtcagcgccc gtcggcatgt attagctcta
                                                                      780
                                                                      840
gaattaccac agttatccaa gtaggagagg agcgagcgac caaaggaacc ataactgatt
                                                                      900
taatgagcca ttcgcagttt cactgtaccg gccgtgcgta cttagacatg catggcttaa
                                                                      960
tctttgagac aagcatatgc tactggcctc gtgccgaatt cgatatcaag cttatcgata
                                                                      968
ccgtcgac
<210> 848
<211> 818
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (595)
<223> n equals a,t,g, or c
<400> 848
gaattcggca cgagctgatg tccacagggt ggcgctcaat cacgttcagg aagcgcgcct
                                                                       60
cggggactgc gatggcacag atcacgtgga tccacctcct atcggtggtc atctgcagcg
                                                                      120
cacctcctcg caggttgcac aggcagcact ccgcagtcca ggcgtgggcc gcgcaccggg
                                                                      180
aacacgtcca gccttcattg accagctcgg gacggatgcc atagcaactg gcatggacct
                                                                      240
gcaggcagca cttgccgcag ggatcagggg gctggtcccg tcgtcgccga tgtaggagtt
                                                                      300
ggcaggcagc ggctccgtgt tctcaccgcc akaggtgaag cacatctcag ggatgagcgg
                                                                      360
tcgggtcttc tgacggcttt tggagggtaa tgtggccggg cagccctctc cgagggaggc
                                                                      420
tatgggtgcc tccttctcag tctgtagggc ctggcagtag gggtagaaga gcgtgcagat
                                                                      480
ggcgcagtag ggctccgtgc gcgcascgct gcgttgaact tcctctcggs ctggaagctg
                                                                      540
                                                                      600
gccgccctgt tcttccactg cagagacagc agcggcctca aggcgtccgg gtcantcaca
tcttcctccc cggagaaagg ggatkcctcc tcgtcacttg aggcctcctg cttcamcacc
                                                                      660
                                                                      720
gacagtgggg accgggtggg cggccggccc aggggatggc gccggctctt cttgatctcc
atcttcaatt tggaaaatgt ggamggtgcc tgcccctctc cgrcccgggc tttggtctcc
                                                                      780
atgcgacctg ccccactgct ggctgcaccg tcctctgg
                                                                      818
<210> 849
<211> 1134
<212> DNA
<213> Homo sapiens
<400> 849
cggcacgagg aggaacccca acccagctag tcccctaggg gctggaggcc aggggcagac
                                                                       60
tgagaagggg ggcatgggtg gtaggggagg gaggaaagac cacccaccaa aataaacagg
                                                                      120
cagatccaaa catttataca ggaaacatct ggctgaacgg aagaggatct tggggakatg
                                                                      180
agaagccccc cacatttcat ttttttttc ctaaaatgtc ctggactggg ttggggaggt
                                                                      240
cagccacctg gggtttaagg ggcaatcccc tccccacacc gacgtgctga ggagcagatg
                                                                      300
tgtgtgagac agacacaagg ggcaaagata aggacaagag ggtgccttct ccttggaatc
                                                                      360
tgttatgagg gctgagggtg tccccgtcca gttcctggac tctgggggat cttgggtgag
                                                                      420
atgggggccg gaatgggctg gggcaggggt gaggctgggc gctcagccta agaagccatc
                                                                      480
ggggtcatca tcctcaaagt ggccttgctg aagcaccttg atgtggtgtt cgtagatttt
                                                                      540
                                                                      600
cagggctggc ccgaggcgga tggacaggcc ggtgagcaca tctgtgcgct gcatgagcag
caaagatttg ccatcaattt cctgctcttg gaaagctgtc gcctgctccg ggaatccagc
                                                                      660
                                                                      720
ctcagtaaaa tattcgacga catccatcac ggtccactcg acgggatccg atggcttctc
```

| tttgcgcccg | ggaggacagc | caaaggggga | cccgtcggcc | ccaggtaggg | ctggtttgcc | 780 |
|-------------------------|------------|------------|------------|--------------|------------|------------|
| tgggggcaaa | ggcacggggg | acggggagtc | tggcccggtg | gcaacagaag | ctgttccccc | 840 |
| ttccttgttc | atggctgcca | tggagaacac | ctggcgggtg | ccgctgcccg | gggctggccc | 900 |
| ccgcccttca | tcctggccct | ggagggcaga | ttgcttgagc | ccaggagttt | gagaccagcc | 960 |
| tgggcaacac | agtgagaccc | ctgcttctac | acacacacca | aattagccag | gtgtggtggt | 1020 |
| gcacatctgt | agtcccagct | acttgggagg | ctgaggtgag | agaatcattt | gagccctgaa | 1080 |
| gctcaagacc | tcgtgccgaa | ttcgatatca | agcttatcga | taccgtcgac | ctcg | 1134 |
| | | | | | | |
| <210> 850 | | | | | | |
| <211> 1643 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| -400> PEO | | | | | | |
| <400> 850 | cacattcatg | taggggatgt | atatatteat | gcatatogtg | tatacataga | 60 |
| ggeacgageg | tgtggggtac | aggegeaege | cacatatatt | catctgtgtg | agatatagat | 120 |
| ctaggard | tgtggcctga | aggeaceatg | cacqacactq | ctcctaccac | ctccccaggg | 180 |
| acacciggac | ccctgctcct | cttactaaaa | ccagtttggg | agcaccccca | cccaggcacc | 240 |
| gataacagga | caggctcgcc | tctgaccaga | taactaaaga | agcaggtaga | gcaggaagtg | 300 |
| ggagggagtg | acccaggttc | ccctaataac | cagacttagt | ggcccatgtc | catggagtcc | 360 |
| ggagccagcg | aacgacctcc | gaccatacct | cctgggtacc | aggccaccca | tagacagaga | 420 |
| tagagataac | tcccagctga | ctcactacct | agctggcacc | aatgaggtct | ccacctcagc | 480 |
| ctagactaga | tgtctagtgc | tgactccttc | ctacaggcag | gtgagettgg | gaggcagggg | 540 |
| ccctatagac | ttgggaagcg | ggctcagggt | ctggaggcca | gaggtcttgt | ccccaggccc | 600 |
| accateceat | cagcaagagc | ccaggaggct | ctcagggcag | tcctcctcta | gcaatctcag | 660 |
| agacaacatc | ctcccaggag | tcacatccag | atcaccatac | gcacccgctg | gcccctagca | 720 |
| tottccataa | gtggagaggg | gttggcctgt | ggaggcaggg | gcggccagaa | gatgtgccgg | 780 |
| aaccccatct | agaggctgac | acqtaaaccc | agatggcaca | ggggagcctg | agcatgaagt | 840 |
| gactagacta | tcccttgcgg | gggcccagca | actgccgacc | ccatgtgcca | agccccgcct | 900 |
| gcccactgga | acgcctcaac | aggetgetee | ctgtggttgg | tgacaccacc | actcgggtcg | 960 |
| acttaactaa | ggccagcgga | gcatctcccc | tctgggtcca | ttcacatcca | tcttccccgg | 1020 |
| acaaatgaac | acccccaaa | cactcacttc | ccactttgac | cccagaccaa | acacacagcc | 1080 |
| actcctggaa | tgccggtgat | tgagggtggc | tgggcccttc | tgtgcccaca | aaccagggcc | 1140 |
| tgggctatac | ctgtgtggct | gcacaactgt | gccaggacag | ccttaccttt | gccgggggct | 1200 |
| tegtgeeete | ccagctgcgt | gtgtccatgg | acggggggac | ctggtagatg | tcatgcccca | 1260 |
| tcccggcaga | aggtggcacc | tggtaaatat | cctgggcagg | gcctccaggc | cctgggggca | 1320 |
| cctggtacag | gtctgtggcc | gggctgggaa | acgggtgatg | gggtgtctgc | ttcgagaagg | 1380 |
| tggatgtctg | cttggctggg | ggagactgga | actgagggct | gggacccggg | acttggtaga | 1440 |
| ggccttgctg | agccttgctg | ggagtgggca | ccaggtagac | gctgtctggc | tggggctggt | 1500 |
| aggtgttggg | gagcatgggc | gtgtactggg | aggccggagg | cgctggggca | tggaggccag | 1560 |
| | ggccggggtg | | cggggccagg | ccctcgtgcc | gaattcgata | 1620 |
| tcaagcttat | cgataccgtc | gac | | | | 1643 |
| <210> 851 | | | | | | |
| <211> 2298 | | | | | | |
| <211> 2236 <212> DNA | | | | | | |
| <213> Homo | caniens | | | | | |
| \215> Homo | bapiens | | | | | |
| <400> 851 | | | | | | |
| | tttctcttc | tagaagggga | gggtcacagg | gtcacagatt | caccaaagct | 60 |
| gaaagggctg | aggagctcat | ggtagcctgg | gttgacctac | tctggagcac | ggtgtcttcc | 120 |
| ttctaaactq | agtgactgta | gtactatctg | tgcctctgat | ggtaataaaa | ctgacaagat | 180 |
| gtctaatttt | tttttaagta | ggaccaaagg | aaaacaagat | ttagatagtc | tgactttgct | 240 |
| tttgaacaac | agacattgca | agtcaaaatt | gttgtcaaat | ttacatatgg | taaatgatga | 300 |
| actttaaaaa | tgtgtccagg | tgttagatga | gttcattaga | ctcttttaat | gctaatggct | 360 |
| agtacgttta | aacaaaacag | cagttctctg | ctgcaatatt | . cccattgacc | acttaaatga | 420 |
| ccataagtgg | tcatttaaga | acatgttagg | gttagccctg | atctgaatat | aaaagtgaga | 480 |
| aaagggctac | agtgcatttc | ttggtaactt | aaactgagtc | : ttgaagttat | aatgatccat | 540 |
| tcgagttctg | tgatccttat | tgttcttaat | tgtgtttctc | tacgtattgt | tacagatgag | 600 |
| ccatacgttt | ctttgtatca | atgtagacat | gacttcagat | acctctgagg | acctacccag | 660 720 |
| cagtctagga | ccctgggcca | agtgctggga | ctatggtact | . aaatccagta | gargggcrgt | /20 |
| | | | | | | |

| gtagcaactc | tcccagggaa | cacactaggg | tacttaggga | ggtgctttgt | ggagcatgtt | 780 |
|--|------------|-------------|---------------|--------------------------|--------------------------|--------------|
| gaagetttga | gatctgagca | ggaggcagtg | atgtccctgg | tctattcagg | gaaagatttc | 840 |
| agtgtgaaat | ggtaaacatc | caattgacag | gatttagatt | ttgcttagtt | tttctgcttt | 900 |
| ttaatgtttc | tatcccccat | ctcagtgttt | tctttatcca | tcccagtgat | gccttatttg | 960 |
| aaactgggct | taaactgcaa | aaagaatgaa | gttggattta | ggaagctgtt | agatcattga | 1020 |
| gtggtgttga | gagtgaagtt | tcactagcag | ggaagtttcc | ttgagcctaa | aataaaaaga | 1080 |
| aaaaattaaa | aagaatcagt | ttttttaatt | aaaaaaatag | aaagctgtta | ggctcctaat | 1140 |
| tcgtggggtt | ttttttgta | aaaacagttt | agataatcct | gaatgcaatc | attaacttgg | 1200 |
| ttgctaatta | caagaatgaa | aattataatg | gaaaaggaca | aaataatata | ccagctggtt | 1260 1320 |
| tgttattata | gtccgtgtat | taaaatacta | ttgaaatacg | ttaaaggtaa | atttttaagg | 1320 |
| tttaaaaaaa | atttagtaac | ttacagggat | ggagaattta | gatgtcagag | grggggagar | 1440 |
| ttattttat | aaggtaattt | ttatcctgat | aaggacttaa | aaaaaagttt | atagtagatt | 1500 |
| attttaaagt | aaacatgtta | agtacagtta | aaaagtaagc | attgtagtaa aagaatggac | traartraa | 1560 |
| ctctggtgtg | tattttttat | agtanatage | tttattataa | atactatgtt | totaaotota | 1620 |
| aaactggaat | aatgaaggac | accadatgcc | tcaactgaag | ctttaatcaa | cttattttgg | 1680 |
| agetatete | ttcccttatc | tratgratica | tccctaaaat | aataagatac | atgggatcaa | 1740 |
| atagggggttg | ccttttcaac | acaaatcagt | tggaaaatta | tggtttgagt | cctgttgctg | 1800 |
| ccatggcttc | tatttctcaa | aaatgagtgt | gtatgaacat | accaatctat | gtaataggct | 1860 |
| acctttttt | atcttcttta | gaactttgta | cacaaaccaa | gacaatatca | gggtgacagg | 1920 |
| tgaatgaact | taaattctca | gtcttgtcta | ttcaccaaaa | aagtatactg | cctgttttt | 1980 |
| ctttaattat | tcaaggttga | tgacttttag | gaacatgttt | tatactgtat | tttttaatta | 2040 |
| aagcaagtgc | cttgatgtaa | ttccatgtaa | atcattgctt | aaccctctta | tgggatgagg | 2100 |
| atgagttatt | aatgtattgc | agcctactgg | aaaggagggg | gagttggtta | atagcagata | 2160 |
| cttttcttct | agaagcttat | gttttatgct | gtttattatg | taagatcctg | tatgtgtgtt | 2220 |
| gagatttaga | ggtttcattt | gttttgtctg | ctaataaatt | gttactctaa | taataaaaaa | 2280 |
| aaaaaaaaaa | aactcgag | | | | | 2298 |
| <210> 852 <211> 1952 <212> DNA <213> Homo | sapiens | | | | | |
| <400> 852 | | | | | ~+~~~+~~~+ | 60 |
| ggtagaactc | aagttgctgt | gaacttttct | catccaaaag | actcatttgt | gtggatgcgt | 120 |
| gaccatggga | aaaagaaaaa | aaaaaagatc | tagagagaa | gttcttttcg ggcaaaagtt | tctacaagtc | 180 |
| gacaacccaa | tratactact | tattataata | raaacccagt | ctgctgtgtc | ttcaacatac | 240 |
| tacatgacct | attacaaact | atootaaatt | tttgagttgt | ttgtttctgt | tttgtaaaga | 300 |
| ggtattttt | tagacaccaa | tgaaggtgtc | tctgttttaa | tgatcagggt | ttttattcca | 360 |
| tettttgeat | ttcttctatt | tctgaaggtt | tatctcttgg | catcttttt | tagtttctta | 420 |
| ccataagagt | ttgacccgaa | actgctcact | tcacattgga | tgacaccatg | ttcttcctct | 480 |
| ttgaaaagaa | aaggggaatg | tgtcccacta | gtgaaaggaa | aacttttcaa | cactatccct | 540 |
| gctttaatct | cagcaaactc | agactattct | gcttagcctt | cattagtcat | ctgggtgtga | 600 |
| gtgtgtcttg | ttctgttttt | ctttttaata | aaacttttaa | accatatatt | tagcctgtga | 660 |
| ccaggggggc | caaaccctaa | gatttctggt | aaacctgaag | ggtggccctc | ctcagacaat | 720 |
| ttatctccca | gcaatgaccc | tactacactc | gcgtactgtg | aatttgggag | gaggtaaagt | 780 |
| tgacttctcc | tcgtgggcag | ttttccaatc | accttgtgag | tagacacctg | ccaatattgt | 840 900 |
| ttgaaacctt | tttttaatat | gacatcctct | cttgtcattc | tetteteee | tttcccacag | 960 |
| acttccctcc | tactgggtcc | aggttcagaa | ccaagacttc | tgtacctagt | gctgcctgat | 1020 |
| tggtgaacat | tgacttcaag | tagcatagco | transattta | ttattttaat | gtgtccttcc | 1020 |
| taaagtttcg | ggaagcaggg | tagaaaata | . cycacallic | ayyl | catattttta ctatcggaaa | 1140 |
| tagttagtgtc | ttacattta | tacadayiya | . ccaattttca | . actatagggcc | ttctatgcaa | 1200 |
| cgctcccatt | gagttaggag | tacayccayy | aagttetet | cccaaactoo | caagaatgat | 1260 |
| acacccata | attraaatro | gaataccttt | . taagttttcat | : tagagataga | gtgggagtgg | 1320 |
| gacaggacaca | agacttqcct | agatetttat | tgtatcttqq | ggacttttac | tttgttgttt | |
| gatgettaaa | cttcaaaatt | ctctgtattc | aaatttgatt | gtggcgaatc | tacttcaaaa | 1440 |
| aggaaaaata | atccaacttt | gtggatatta | aatggaaggt | : ttgctgtttt | gatctagttg | 1500 |
| tttccagtgg | agcagtttta | tgaaatatgt | tctataagat | gtacatttt | tcattgtaac | 1560 |
| atagaaattg | taaataattg | attaaagtgo | tgcattttga | tgaattttt | ctagccattt | 1620 |
| | | | | | | |

```
ttaaagagaa aactaggaat tgagtatttt gtgtacggta tgtttccatc ctccctcccc
                                                                  1680
ttcctcctcc cctcctctt ctctcttcct acctatttaa ttttcatttg tcatgaggtt
                                                                  1740
tttggatttg ccaatgatct gctggacatc atgccccatg tcatagagaa taaagctgat
                                                                  1800
gattgtacca gtcttaaatt attcatgatt caataaaatt gatgcttatt tattcaaaaa
                                                                  1860
1920
                                                                  1952
aaaaaaaaa aaaaaaaaa aaaaaaaaa aa
<210> 853
<211> 1076
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (35)
<223> n equals a,t,g, or c
<400> 853
                                                                   60
qacqqctqca gaacatccgc cgcaccgctg ggggncaacg ttgtcggacc gaggagtccg
                                                                   120
aggtggcgac tgagtgagat acccagctgt gcggagctag gacgcggaac atcccagagg
                                                                   180
ccagcatcaa catgctgcca cctgcccacc accaggcctt tgtccgacat cgcctggagg
                                                                   240
aggeetteeg tgtggeeett gttgggeace gacateceet geetgteetg geetatgtee
                                                                   300
gcctcacaca ccggagatct gggaggttcc tgtcccagga tgaccttgtg cagtccattg
                                                                   360
gtgtgagtgc agcactaggg gcagccggcg tggtgctctg gggggacctg agcctctcca
gctctgagga ggagtgctgg catctccatg actacctggt ggacaccttg ggcccctatg
                                                                   420
                                                                   480
tgatcaatgt gaccagggca gcgatggcct gcagtcacca gcggtgccat ggccacgggc
gctgtgcccg gcgagatcca ggacagatgg aagcctttct acacctgtgg ccagacggca
                                                                   540
                                                                   600
gccaggagcc caggcctggg cctaaagaag cagtataaag ccagggcccc tgccactgcc
                                                                   660
tettettte cetgetgeca ettttecagt cetggaacta etetgtecca etettgetet
                                                                   720
attcagttta cagtcaaccc tcccaagcac acaccccgct tcccttggaa tccctgaggg
                                                                   780
gtagaagggg ccagaaaaaa cgcttataaa accagaggcc ctctgagatc atgtgagtcc
                                                                   840
tccatggcaa ggaagcagtt ccagggagag tcaggttcca gctagttagg gctgccagcc
                                                                   900
tagggctttg tgcctacacc tcactaagcc catggagagg tcacagatgg gccgtgcacg
                                                                   960
                                                                  1020
qqcagatggg ccccaaaaaa tcttggcgaa ggtcggtaaa gtgctaagct gttgtctgca
ctctttcatc ataaagtcac ttttttccac taaaaaaaaa aaaaaaaaa ctcgag
                                                                  1076
<210> 854
<211> 561
<212> DNA
<213> Homo sapiens
<400> 854
ggccattatg gccggggtga ttgccatttg tagaggggaa ggaatcaagg gactttaagc
                                                                    60
tagatcaaaa tctggggaca aattctcctg ctaactgcaa gttaaaatag gcccttctta
                                                                   120
ctgaatttcc ctgtttgttt ctctgcagac aatgctttag ccctactctt gggcccccaa
                                                                   180
gttagcagag taatcaaagc ttcctaccgt ttggcctact attccagact agtccctcga
                                                                   240
ggggttccct tccaaaatat gcagggctca ggctcccaat tccgggcctg tctgctttgc
                                                                   300
                                                                   360
ttgtgtttct cctgtccctg ttctcccgga gggcccaggt ggaactcacg acagggaggg
                                                                   420
agacgettee caaaaacetg cagggetatt teecagaatt tggtttteaa gtacaaaact
ttttgtcctg taagatatat gcagcctcac agaagcagcc tctgcctcca ctttaccagc
                                                                   480
                                                                   540
tacgttttta tcttaagcac atggggctcc cttagaactt actccactga tttaaaaaaa
                                                                   561
aaaaaaaaa aaaaaaaaa a
<210> 855
<211> 1629
<212> DNA
<213> Homo sapiens
<400> 855
                                                                    60
cccacgcgtc cgttccagag ctcttggaat tctgacatct catcaaagtg gctttttgaa
```

```
120
aacatctaca agcaaaatta cttcaactgc gtggaaaaat aaagacatta ccatgcagtc
caccaagcag tatgcctgtt tgcacgattt aactaacaag ggcattggag aagaaataga
                                                                    180
taatqaacac ccctggacta agcctgtttc ttctgagaat ttcacttctc cttatgtgtg
                                                                    240
                                                                    300
gatgttagat gctgaagatt tggctgatat tgaagatact gtggaatgga gacatagaaa
                                                                    360
tgttgaaagt ctttgtgtaa tggaaacagc atccaacttt agttgttcca cctctggttg
ttttagtaag gacattgttg gactaaggac tagtgtctgt tggcagcagc attgtgcttc
                                                                    420
tccagccttt gcgtattgtg gtcactcatt ttgttgtaca ggaacagctt taagaactat
                                                                    480
gtcatcactc ccagaatctt ctgcaatgtg tagaaaagca gcaaggacta gattgcctag
                                                                    540
                                                                    600
gggaaaagac ttaatttact ttgggagtga aaaatctgat caagagactg gacgtgtact
                                                                    660
tctgtttctc agtttatctg gatgttatca gatcacagac catggtctca gggttttgac
tctgggagag gctgccttat ttggagcacc ttaatctctc tggttgtctt actataactg
                                                                    720
gtgcaggcct gcaggatttg gtttcagcat gtccttctct gaatgatgaa tacttttact
                                                                    780
                                                                    840
actgtgacaa cattaacggt cctcatgctg ataccgccag tggatgccag aatttgcagt
gtggttttcg agcctgctgc cgctctggcg aatgaccctt gacttctgat ctttgtctac
                                                                    900
                                                                    960
ttcatttagc tgagcaggct ttctttcatg cactttactc atagcacatt tcttgtgtta
                                                                   1020
accatccctt tttgagcgtg acttgttttg gccccatttc ttacaacttc agaaatctta
                                                                   1080
atttaccagt gaattgtaat gttgtttctc ttgcaaatta tacttttggt ttaaaaaaggg
                                                                   1140
attaagtett tteaaaaggg tgagaacagt ettacatttt tettttaaat gaaatgettt
                                                                   1200
aaaqaatgtt ggtaatgcca tgtcatttaa agtatttcat agataatttt gagttttaaa
gtccatggaa gtgaatgggt cctcttacac attaacactg taccaagctt tgcagatctt
                                                                   1260
                                                                   1320
ttccgacaca catgtctgaa gacttatttt caaagacagc acatttttgg aaactaatct
                                                                   1380
cttttccgta atatttcctt tatttcaatg attctcagaa ggccaattca aacaaaccca
                                                                   1440
catttaaggt tetttaggat tatagaataa attggettet gagtgttage teagtgaget
aggaaagcac caatcgatat ttgtttcctt tagggatact ttgttctcac cactgtccct
                                                                   1500
atgtcatcaa atttgggaga gattttttaa aataccacaa tcatttgaag aaatgtataa
                                                                   1560
                                                                   1620
aaaaaaaa
                                                                   1629
<210> 856
<211> 1018
<212> DNA
<213> Homo sapiens
<400> 856
                                                                     60
cccacgcgtc cgaaatagat gatatataga tgacaattgc aattgtcatt ttaattattt
tccctacagt aaagaaccta gctctgagca gtgaaattgt aatggcactt taaaggaagt
                                                                    120
aaqccqttaa ctgttctcta gtggagcgat ctccaactgt tttggcacta gggacgggtt
                                                                    180
ttqtqqaaqa aaatttttcc acaggactgg gggtttaggg ggatggtttc aggatgattc
                                                                    240
aaqtacatta catttatcat tagattctca taaggagcat gcaacctaga tctcttgcac
                                                                    300
gtgcggttca cagcaggatt cgagctcctt tgagaatcta atgccatggc tgatctaaca
                                                                    360
ggaaactgag ctcaggcagt aatgcttggc accgccccc accttctatg cagcccggtc
                                                                    420
gtggcctggg gactggggac ccctgctcta gtcagtaata aggtacttgt gccagaatat
                                                                    480
                                                                    540
aaatcaacac attqcttcct ttatcaaaga agtcttgtta tttaaaaaaa gtcaactgag
                                                                    600
ccagtatgat tagtgatgta attgattttc attctggcac aagcctcttt cattctggac
ageteacaaa tagttaatgg accatgettt gaatageett eetetaagea acatttataa
                                                                    660
atactgatat tttagaactg tttacatttc ttctgtttat ttttgaattt tcagtttgat
                                                                    720
                                                                    780
atcttqtcct tattcattgt tgtataaaca actgtacttt aatttcaagt agtattaaaa
gtatttcact tcagtttggg gggattatta tcaatttata attttataaa agtattttaa
                                                                    840
agaataattg taaattttcc ataaattaca acttcctgcc atcttttatt aaataataat
                                                                    900
cttgcttaag gcatatagac agacattatt atgagtattc cagtaaaaaa aatctacatc
                                                                    960
1018
<210> 857
<211> 892
<212> DNA
<213> Homo sapiens
<400> 857
cccacgcgtc cggtttgtgg agtatcttca tgggtattac caccactatt tacatgaagt
                                                                    60
cttcaagtgg ccttaggaag ccgctggtaa ctgaacaact ttctctaaaa agccaagctc
                                                                    120
atttttaact agagaatctg ggaaatactg tgagtttttt ctctttcctt ttaaaggtac
                                                                    180
```

```
240
aattattata aattcctaac tgctcctaaa atcatataga acatttccag agccaaagaa
                                                                 300
tttctaagct atagtttaaa atgatagcat tttggaagca agcctgaatt cacttcctat
aatgttttcc agattgtata agcaaaggct attattgctg ctgtggtata gtcactttgg
                                                                 360
                                                                 420
tggtggtggt agcaggctag agagaatctc ctttgccctg aagtctagaa tgtaaatttg
                                                                 480
taccaccaaa cacaatagcc aatattataa acaggaagta agaaaaaaac ctcatctcac
ttgcaaaaga tcagcttatt ttcaattgtg gaaattaatt tgttatagat aacagtagat
                                                                 540
                                                                 600
ttgagtgact ttatttactt ttcctcttca gtataaaaaa taatattagt ataatctcat
tacatcaata tattgaatag ttaagttttt teetetttta atatttaata tttgeeetae
                                                                 660
                                                                 720
tgggcatgag ttggccatta ttgaagccag gtggtgagta cctaagaatt cattctacta
                                                                 780
tttttctatt ttcatatacc tttggaattt actatcataa aattattttt aaggtatata
                                                                 840
ttttaaaatc ttctctgtta gctagtcctt ctcttgaacc acattcttca aaagttctcc
                                                                 892
<210> 858
<211> 651
<212> DNA
<213> Homo sapiens
<400> 858
                                                                  60
qttaaacaaa ataagatttc aaattcagta caaactacat aatccagtga tttctcaaag
                                                                 120
agcactcttt gctagcttct tcctaaacaa aatctactct aggaagatgg cccacctgga
                                                                 180
240
accttgggga actgatcaca aagagcettt tgagggtgat ggaaagetac ecetecatte
                                                                 300
ctcaggcagt tttccaaaga tgacacttgg ctaaatgctc agggtattta cagtcatagg
                                                                 360
agataaacta tcaacttgtt actgttaaaa aaatcttgag atctgggatc ttgatgcctg
                                                                 420
aaaatcccaa gattggtact tggcaaactg aaagaaatct agaaaaccct agagatcagg
                                                                 480
catctgtggc cagctaactg gtcatacaaa tggattgttg tggtgaactt gtatagtatt
                                                                 540
aatcctgaga tgctgtcccc ctccaccccc accccacaa aaaaaataaa taaagtagta
                                                                 600
ttaaqttagc ctcatacaaa tgctggcacc atgctcctgg acttctcagc ctccataact
                                                                 651
<210> 859
<211> 1270
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (553)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1070)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1208)
<223> n equals a,t,g, or c
<400> 859
acgtataggg aaagctggta ctcctgcagg taccggtccg gaattcccgg gtcgacccac
                                                                   60
gcgtccggct gaatgttttt ttcattttcc tgagagatgc aaatgttcat tcattcatct
                                                                  120
cattatacaa cacagtacat aaatgtagct tcagagcgta ttaagtgctt ttatacacaa
                                                                  180
gtgctggctg tgtggaccag gtggtagctc atttaggccc caaattcatt aagggcaggg
                                                                  240
tctgactctt aggcttctta atatttggtt tggtgcatgg tcaagagctg gacccacatg
                                                                  300
ttgcatagca gcagggctga tatgtttaaa gacgctgggc tttttctgct ctggggccct
                                                                  360
                                                                  420
ttcccggggg ttccggtgag tccctcccca ggtgggtctg cccccacccg tgtgggcggg
                                                                  480
attagetece agaggetgge caggeeceae etgggggarg ettgagggea gggeeceaag
gctgagattc aggcttgggg gaacagagca ggaaagagac ccggtaccga aagtgagcgg
                                                                  540
```

| | tantaaaata | aataataaac | aggggtcggt | cactggcttt | aactccaaaa | 600 |
|------------|-------------|------------|--------------------------|------------|------------|------------|
| ggcaggcacc | ctanceacacg | attaaactcc | aagcatggaa | cactggagtg | gttcattttg | 660 |
| ccarageage | ctctaaatcc | gtacattaat | tacccaccgc | aaggagagg | cagttgcctt | 720 |
| accaycaayc | attaattaa | accedatasa | tcaccaggta | actctcatcc | tectaceaga | 780 |
| atagggtag | tataattta | gccaggtgag | ataatgtgat | cattcattga | agtgacattt | 840 |
| grattages | caractetect | cctttaacca | tttcaccctc | aggagtgatt | ctcctttatt | 900 |
| tagasttata | agggettet | atgatgatt | caaatgactt | ttgagttcca | aatagtgttt | 960 |
| tggcattgtc | agggaacgcg | acgacccacc | aaaaaaaaa | adacaaccac | tctagaggat | 1020 |
| ctactttaac | atagggtag | atacaacatc | atagctcttc | tatagtgtcn | cctaaattca | 1080 |
| ccaagettac | gracycycyc | caacatcata | actgggaaaa | cctagagtta | cccaacttaa | 1140 |
| tagasttaga | ggagatggg | ctttcaccaa | ctggggttat | aacgaaaagg | ccgcacgatc | 1200 |
| gagattanca | acactttaca | caacctgaat | ggcgaatggg | accocctot | aacggggcat | 1260 |
| taaacgcggc | acageeegeg | caaccagaac | 5505000555 | | 3333 | 1270 |
| caaacgcggc | | | | | | |
| <210> 860 | | | | | | |
| <211> 3145 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | L | | | | | |
| <400> 860 | | | | | | |
| aagtgaaagg | cgaggttgct | gtaagcggct | aatcataggc | tgtggggaca | agcaatgtta | 60 |
| aaaatgaaga | aaaactaaga | cgcagtcttc | caaacctgtc | ccgaacatct | aatacacaag | 120 |
| ttgactcagt | gaaaagcagc | agaagtgact | caaattttca | agtgccaaac | ggaggaatac | 180 |
| ctcgtatgca | acctcaggct | tcagccatac | cttctccagg | caaattccgt | tcccctgcag | 240 |
| caccatctcc | tttggctctt | cggcaaccag | tgaaagcatt | tagtaaccat | ggctctggtt | 300 |
| ctcctggtag | ccaagaaata | acacagctca | cacaaaccac | ctcytcacct | gggcctccta | 360 |
| tggttcagag | cacagtctca | gcaaatcctc | ccagcaatat | caacagcgct | actctaacca | 420 |
| gacctgcagg | gacaactgca | atgagaagtg | gcttgcccag | acccagtgcc | ccttctgctg | 480 |
| ggggcatacc | agtgyctcgc | agcaaacttg | cacagcctgt | tcgcagatcc | ttgccagctc | 540 |
| ctaaaaccta | tggtagcatg | aaagatgaca | gttggaaaga | tggctgttac | tgaccagcaa | 600 |
| agacaagaat | gcagaagtcc | acggcttcat | ggataccctt | caccaggcta | aaaaacaact | 660 |
| tttatatgca | gactgttcag | ataagactct | tgggatttat | aaaatcccag | ccctctctgt | 720 |
| cttaattagc | acaaaccgac | agagatcatc | aaacagcact | ttaatgacat | ttaacatcag | 780 |
| atgtgtttgg | taatcataca | atcactctcc | atagaatcac | ttttagtttt | gtttaataga | 840 |
| aactaggttg | atttttaaaa | aatatttgac | agaggccaat | atctgggcaa | atacctaatg | 900 960 |
| gatgccaaag | agaaatgccc | atttgtaaat | gagaaaaatg | cccatttgtg | cacaagaaaa | 1020 |
| tggtgaattc | aggctatcca | aaacttcaca | ttcaacctaa | tttactgtat | aaatagtate | 1020 |
| aataaatatt | tgtgttaatg | agaactaata | ttctgactaa | ttatctaaag | tgtttcacta | 1140 |
| gtacaccagg | aaactacaga | ttgagattag | ggggtgggag | gaaagaaacc | tasttagas | 1200 |
| attaaaacat | tcctaaattt | agcagaattt | cagaaatgat | agatataga | aggaggagat | 1260 |
| agaaaaattg | tcatttaatc | ttaagttttg | gatgtagctc | acatgleace | accaccagat | 1320 |
| agtgttacag | catgtateca | teatguigea | ttgacacatc | tasactttat | agttectage | 1380 |
| tgattgccaa | taagggettaa | tattagitgt | acaatctttc aacttcttca | catactatta | tetttacaga | 1440 |
| tcaggaaaga | tggcctttgc | tactgaaget | ttcatgatag | raaaraaraa | ataatatata | 1500 |
| actaagagat | tastagasas | ccacctccct | gcttgcaacc | tagaacaaaa | ccataccata | 1560 |
| colliation | rgasasasat | ctatccactt | aacctacaaa | atctctggtg | atgacagttg | 1620 |
| tattattaat | gyaaaaaaaac | ataaccotct | attatgtggt | aggaaaatat | agcctgctaa | 1680 |
| atcatactta | actacatgge | ctttaaactq | agtaactgta | taaaacatct | attgaaaatt | 1740 |
| cttttccttt | tgacttagat | tctgccttac | atcaattttt | gcatttttgg | taaaaaaaaa | 1800 |
| accetactac | gtatgactct | aacctgatac | ttgctctcta | atggctctta | atatatcctt | 1860 |
| gaaatcggct | atttcaattt | tatcagactt | ttaccagagt | aaaacttgct | tctgtagcag | 1920 |
| gaaaccggct | ttttattato | aggtctgttt | ttaaatactt | aatttgaaca | gctctaagat | 1980 |
| attgtcactt | aggtcatcta | aaagctttta | gagatttgaa | cataagttca | tttcctgtta | 2040 |
| atcaaagaca | ttccataaat | tggcaaaaga | aattgggaga | gagaaataga | aggcttgata | 2100 |
| ttctggacag | cattaaggtt | gataggttga | tgataaaaac | ttaaaaccag | gacctccatt | 2160 |
| ctatcataac | tgacaccatq | gtagtctgtc | agcttgacca | gtggagagtc | attcatttag | 2220 |
| cacaagcagc | tggagattta | aactgccagt | actatgtatt | tggtgtataa | tgcaaggaag | 2280 |
| aaactttatc | cttgaatttg | agggtgatgg | ggtgggtcag | gaaaggatgg | cgccagaatt | 2340 |
| ctacatgata | atgaactaaa | aaatgttgct | tttcagagga | agataaagca | tcttcttttg | 2400 |
| ggaggggggt | atctcatgtc | taagtaagta | aaagaaagaa | gtagctactg | tctcttttaa | 2460 |
| | | | | • | | |

| tgctgcaatc gttagataat catcagaaaa ttttgatctg acttttagtt tttttctgtt tttgataaac | caaaacagaa taataattaa cagtttcaaa aaatgtctat agtttggtaa tcttaaagag tgggaaaatc tagtgcctat ttattttgtg | aaggaatttt aggagtattc tttttttat agtattattt aaaaattgcc taaggattta gattttaact | acctattatg aggttattta taaaatattt tacctgctgt tttttactag ctgtggttag tatgtttgat | aaacwtatta actttgtttt catcacttgt tgtactacca aaagcctttg tcttacagaa atatagtagt | catttttaa taaatggctg taaaacatat cagactgttg tatattgcaa gaaatgtgga aagggtttta | 2520 2580 2640 2700 2760 2820 2880 2940 3000 |
|--|--|---|--|--|---|--|
| aatgagctct gtgtgttaat | gcttccaaag aaaagtgtaa aaaaaaaggg | ttatttaatt agaattggaa | ttctcagtgt | ttgaatgtta | ttttttgtaa | 3060 3120 3145 |
| <210> 861 <211> 3145 <212> DNA <213> Homo | sapiens | | | | | |
| <400> 861 | | | | | | |
| | cgaggttgct | gtaagcggct | aatcataggc | tgtggggaca | agcaatgtta | 60 |
| aaaatgaaga | aaaactaaga | cgcagtcttc | caaacctgtc | ccgaacatct | aatacacaag | 120 |
| | gaaaagcagc | | | | | 180 |
| | acctcaggct | | | | | 240 |
| | tttggctctt | | | | | 300 360 |
| | ccaagaaata | | | | | 420 |
| | cacagtctca gacaactgca | | | | | 480 |
| | agtgyctcgc | | | | | 540 |
| | tggtagcatg | | | | | 600 |
| | gcagaagtcc | | | | | 660 |
| | gactgttcag | | | | | 720 |
| | acaaaccgac | | | | | 780 |
| | taatcataca | | | | | 840 |
| | atttttaaaa | | | | | 900 |
| | agaaatgccc | | | | | 960 |
| tggtgaattc | aggctatcca | aaacttcaca | ttcaacctaa | tttactgtat | aaatagtatc | 1020 |
| | tgtgttaatg | | | | | 1080 |
| | aaactacaga | | | | | 1140 |
| | tcctaaattt | | | | | 1200 |
| | tcatttaatc | | | | | 1260 |
| | catgtatcca | | | | | 1320 |
| | aagggcttaa | | | | | 1380 |
| | tggcctttgc | | | | | 1440 1500 |
| | cttgtttcta tgatacaaca | | | | | 1560 |
| | ggaaaaaaaat | | | | | 1620 |
| | attacatggc | | | | | 1680 |
| | agttgatcca | | | | | 1740 |
| | tgacttagat | | | | | 1800 |
| | gtatgactct | | | | | 1860 |
| | atttcaattt | | | | | 1920 |
| | ttttattatg | | | | | 1980 |
| | aggtcatcta | | | | | 2040 |
| | ttccgtaagt | | | | | 2100 |
| | cattaaggtt | | | | | 2160 |
| | tgacaccatg | | | | | 2220 |
| | tggagattta | | | | | 2280 |
| | cttgaatttg | | | | | 2340 2400 |
| | atgaactaaa | | | | | 2460 |
| | atctcatgtc caaaacagaa | | | | | 2520 |
| aaaccacyca | Luuducayda | caageeecag | Jesteugege | accuraciona | | |

| tgctgcaatc | taataattaa | aaggaatttt | acctattatq | aaacwtatta | cattttttaa | 2580 |
|---------------|-------------|--------------|--------------|--------------|------------|------|
| gttagataat | caataattaa | aggaatett | acctattat | actttattt | taaatggctg | 2640 |
| catcagaaaa | cagillicaaa | tttttt | taaaatattt | catcacttot | taaaacatat | 2700 |
| catcagaaaa | aaatgtctat | | taggtagtat | tatactacca | cadactotto | 2760 |
| ttttgatctg | agtttggtaa | agtattattt | taccigcigc | anaggetta | tatattacaa | 2820 |
| acttttagtt | tcttaaagag | aaaaattgcc | tttttactag | adageeeeeg | catattycaa | 2880 |
| tttttctgtt | tgggaaaatc | taaggattta | ctgtggttag | tettacagaa | gaaatytyya | 2940 |
| tttgataaac | tagtgcctat | gattttaact | tatgtttgat | atatagtagt | aagggttta | |
| tgaatgttga | ttattttgtg | ccaacagccc | agaattgtca | cttatatgta | agcagaaaac | 3000 |
| aatgagctct | gcttccaaag | ttatttaatt | ttctcagtgt | ttgaatgtta | ttttttgtaa | 3060 |
| gtgtgttaat | aaaagtgtaa | agaattggaa | aaaatataaa | tattcttaac | tcaagcaaaa | 3120 |
| aaaaaaaaa | | | | | | 3145 |
| | | | | | | |
| <210> 862 | | | | | | |
| <211> 3195 | | | | • | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| \Z13> 1101110 | Daprono | | | | | |
| <400> 862 | | | | | | |
| aautuaaauu | caaaattact | gtaagcggct | aatcataggc | tgtggggaca | agcaatgtta | 60 |
| aagegaaagg | aaaactaaga | cgcagtcttc | caaacctgtc | ccgaacatct | aatacacaag | 120 |
| ttanatanat | gaaaaggagg | agaagtgact | caaattttca | agtgccaaac | ggaggaatac | 180 |
| ctgactcage | agataagaat | tcagccatac | cttctccagg | caaattccqt | tcccctgcag | 240 |
| cicgiatgea | accicagget | cggcaaccag | tranagratt | tagtaaccat | gactctgatt | 300 |
| caccatetee | aganganata | acacagetea | cacaaaccac | ctcctcacct | gggcctccta | 360 |
| ctcctggtag | ccaagaaata | gcaaatcctc | gazgazztat | caacacact | actctaacca | 420 |
| tggttcagag | cacagtetea | geaaateete | ccaycaacac | acceptace | ccttctacta | 480 |
| gacctgcagg | gacaactgca | atgagaagtg | gettgeedag | tagaagatag | ttaccaacta | 540 |
| ggggcatacc | agtgyctcgc | agcaaacttg | cacageetgt | tegeagatee | tanagagan | 600 |
| ctaaaaccta | tggtagcatg | aaagatgaca | gttggaaaga | tggetgttae | nanagaagt | 660 |
| agacaagaat | gcagaagtcc | acggcttcat | ggataccctt | caccaggeta | aaaaacaact | 720 |
| tttatatgca | gactgttcag | ataagactct | tgggatttat | aaaatcccag | ccctctctgt | 780 |
| cttaattagc | acaaaccgac | agagatcatc | aaacagcact | ttaatgacat | ttaacatcag | |
| atgtgtttgg | taatcataca | atcactctcc | atagaatcac | ttttagtttt | gtttaataga | 840 |
| aactaggttg | atttttaaaa | aatatttgac | agaggccaat | atctgggcaa | atacctaatg | 900 |
| gatgccaaag | agaaatgccc | atttgtaaat | gagaaaaatg | cccatttgtg | cacaagaaaa | 960 |
| tggtgaattc | aggctatcca | aaacttcaca | ttcaacctaa | tttactgtat | aaatagtatc | 1020 |
| aataaatatt | tgtgttaatg | agaactaata | ttctgactaa | ttatctaaag | tgtttcacta | 1080 |
| gtacaccagg | aaactacaga | ttgagattag | ggggtgggag | gaaagaaacc | tgggctagag | 1140 |
| attaaaacat | tcctaaattt | agcagaattt | cagaaatgat | ttttgcagat | tcattagaaa | 1200 |
| agaaaaattg | tcatttaatc | ttaagttttg | gatgtagctc | acatgtcacc | accaccagat | 1260 |
| agtgttacag | catgtatcca | tcatgttgca | ttgacacatc | aaacttgtgt | gtgtttgttt | 1320 |
| tgattgccaa | aagggcttaa | tatcagttgt | acaatctttc | tgaactttat | agttcctggc | 1380 |
| tcaggaaaga | tggcctttgc | tattgaagcc | aacttcttca | catgctgtta | tctttacaga | 1440 |
| actaagagat | cttgtttcta | ttagcaggtt | ttcatgatag | gaaagaacaa | gtagtgtgtg | 1500 |
| tctttattct | tgatacaaca | ccacctcggt | gcttgcaacc | tggaacaaaa | ccataccatg | 1560 |
| agakagaggg | ggaaaaaaat | ctatgcactt | aacctacaaa | atctctggtg | atgacagttg | 1620 |
| tattattact | attacatggc | ataacggtct | attatgtggt | aggaaaatat | agcctgctaa | 1680 |
| atcctactta | agttgatcca | ctttaaactg | agtaactgta | taaaacatct | attgaaaatt | 1740 |
| cttttccttt | tgacttagat | tctgccttac | atcaatttt | gcatttttgg | taaaaaaaaa | 1800 |
| accetactac | gtatgactct | aacctgatac | ttgctctcta | . atggctctta | atatatcctt | 1860 |
| gaaatcggct | atttcaattt | tatcagactt | ttaccagagt | aaaacttgct | tctgtagcag | 1920 |
| gcctctcatt | ttttattatq | aggtctgttt | ttaaatactt | aatttgaaca | gctctaagat | 1980 |
| attotcactt | aggtcatcta | aaagctttta | gagatttqaa | cataagttca | tttcctgtta | 2040 |
| atraaarara | ttccataaat | tggcaaaaga | aattaggaga | gagaaataga | aggcttgata | 2100 |
| ttctccacacac | cattaacctt | gataggttga | tgataaaaa | ttaaaaccaq | gacctccatt | 2160 |
| atatastasa | tracarrato | ataatctatc | agettgacea | gtggagagtc | attcatttag | 2220 |
| gogogogogo | tagacaccatg | aactoccaot | actatotatt | taatataa | tgcaaggaag | 2280 |
| cacaaycayc | cttqsattta | addigcodge | aataaatcaa | gaaaggatgo | cgccagaatt | 2340 |
| adactitate | atasatasa | agggryargg | tttcacacca | , acataaaca | tcttctttg | 2400 |
| ctacatgata | atgaactada | taadyilyil | aaanaaanaa | atagetacto | tctcttttaa | 2460 |
| ggaggggggt | accidatyto | caaytaayta | ttttcactco | . gaagatttaa | aaaatatata | 2520 |
| aaaccacgta | taataattaa | . caayuquday | acctattato | r aaacwtatta | catttttaa | 2580 |
| igeigeaate | taataattaa | aayyaatttt | . acceateaty | , | | |
| | | | | | | |

| gttagataat | cactttcaaa | aggagtattc | aggttattta | actttgtttt | taaatggctg | 2640 |
|-------------|------------------------------|------------|------------|------------|-------------|------|
| catcagaaaa | aaatototat | tttttttat | taaaatattt | catcacttqt | taaaacatat | 2700 |
| ttttgatctg | adatytetat | actattattt | tacctactat | totactacca | cagactgttg | 2760 |
| acttttagtt | agtttggtaa tattaaaaa | ageactacce | tttttactag | aaagcctttg | tatattgcaa | 2820 |
| tttttctgtt | terranagag | tanggattta | ctataattaa | tettacagaa | gaaatgtgga | 2880 |
| tttttctgtt | tgggaaaatc | Laaggattta | totatttat | atatagtagt | aagggttta | 2940 |
| tttgataaac | tagtgcctat | gattttaact | tatgtttgat | atacagcagc | adgggcccd | 3000 |
| tgaatgttga | ttattttgtg | ccaacagccc | agaattgtca | Citatatyta | agcagaaaac | 3060 |
| aatgagctct | gcttccaaag | ttatttaatt | ttctcagtgt | ttgaatgtta | tettetgeaa | 3120 |
| gtgtgttaat | aaaagtgtaa | agaattggaa | aaaatataaa | tattcttaac | tcaagcaaaa | |
| aaaaaaaaaa | aaaaaaaaa | aaaaaaatta | aaaaaaaaa | aaaaaaaaaa | aaaagtacct | 3180 |
| cggccgcgac | cacgc | | | | | 3195 |
| | | | | | | |
| <210> 863 | | | | | | |
| <211> 3195 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | • | | | | | |
| <400> 863 | | | | | | |
| aagtgaaagg | caagattact | gtaagcggct | aatcataggc | tgtggggaca | agcaatgtta | 60 |
| aaaatdaada | aaaactaaga | cacaatcttc | caaacctgtc | ccgaacatct | aatacacaag | 120 |
| ttaactcaat | dagaadcadc | agaagtgact | caaattttca | agtgccaaac | ggaggaatac | 180 |
| -tastatasa | aggtagaget | traccatac | cttctccagg | caaattccqt | tcccctgcag | 240 |
| cicgiatgea | tttggtgtt | caaccaa | tgaaagcatt | tagtaaccat | aactctaatt | 300 |
| caccatctcc | aaaaaaaata | acacacacac | cacaaaccac | ctcctcacct | gggcctccta | 360 |
| ctcctggtag | Ccaayaaata | acacagetta | ccagcaatat | caacagcgct | actictaacca | 420 |
| tggttcagag | cacagucuca | gcaaaccccc | ccagcaacac | acceptace | ccttctacta | 480 |
| gacctgcagg | gacaactgca | atgagaagtg | gcttgcccag | tagaagatag | ttaccaactc | 540 |
| ggggcatacc | agtgyctcgc | agcaaacttg | cacagcctgt | tagatattaa | traccarcaa | 600 |
| ctaaaaccta | tggtagcatg | aaagatgaca | gttggaaaga | ggccgccac | aaaacaact | 660 |
| agacaagaat | gcagaagtcc | acggcttcat | ggataccctt | caccaggeta | agatatatat | 720 |
| tttatatgca | gactgttcag | ataagactct | tgggatttat | aaaatcccay | ttaagatgag | 780 |
| cttaattagc | acaaaccgac | agagatcatc | aaacagcact | ttaatgacat | ctaacatcag | 840 |
| atgtgtttgg | taatcataca | atcactctcc | atagaatcac | ttttagttt | gillaalaya | 900 |
| aactaggttg | atttttaaaa | aatatttgac | agaggccaat | atctgggcaa | atacctaatg | 960 |
| gatgccaaag | agaaatgccc | atttgtaaat | gagaaaaatg | cccatttgtg | cacaagaaaa | |
| tggtgaattc | aggctatcca | aaacttcaca | ttcaacctaa | tttactgtat | aaatagtatc | 1020 |
| aataaatatt | tgtgttaatg | agaactaata | ttctgactaa | ttatctaaag | tgtttcacta | 1080 |
| gtacaccagg | aaactacaga | ttgagattag | ggggtgggag | gaaagaaacc | tgggctagag | 1140 |
| attaaaacat | tcctaaattt | agcagaattt | cagaaatgat | ttttgcagat | tcattagaaa | 1200 |
| agaaaaattg | tcatttaatc | ttaagttttg | gatgtagctc | acatgtcacc | accaccagat | 1260 |
| agtgttacag | catgtatcca | tcatgttgca | ttgacacatc | aaacttgtgt | gtgtttgttt | 1320 |
| tgattgccaa | aagggcttaa | tatcagttgt | acaatctttc | tgaactttat | agttcctggc | 1380 |
| tcaggaaaga | tagcctttgc | tattgaagcc | aacttcttca | catgctgtta | tctttacaga | 1440 |
| actaagagat | cttatttcta | ttagcaggtt | ttcatgatag | gaaagaacaa | gtagtgtgtg | 1500 |
| totttattot | tgatacaaca | ccacctcggt | gcttgcaacc | tggaacaaaa | ccataccatg | 1560 |
| agakagaggg | ggaaaaaaat | ctatgcactt | aacctacaaa | atctctggtg | atgacagttg | 1620 |
| tattqttqct | attacatggc | ataacggtct | attatgtggt | aggaaaatat | agcctgctaa | 1680 |
| atcctactta | agttgatcca | ctttaaactg | agtaactgta | taaaacatct | attgaaaatt | 1740 |
| cttttccttt | tgacttagat | tctqccttac | atcaattttt | gcatttttgg | taaaaaaaaa | 1800 |
| accctactac | gtatgactct | aacctgatac | ttgctctcta | atggctctta | atatatcctt | 1860 |
| gaaatcggct | atttcaattt | tatcagactt | ttaccagagt | aaaacttgct | tctgtagcag | 1920 |
| gcctctcatt | ttttattatq | aggtctgttt | ttaaatactt | aatttgaaca | gctctaagat | 1980 |
| attotcactt | aggtcatcta | aaagctttta | gagatttgaa | cataagttca | tttcctgtta | 2040 |
| atcasacaca | ttccataaat | tggcaaaaga | aattgggaga | gagaaataga | aggcttgata | 2100 |
| ttataaagaca | cattaaggtt | gataggttga | tgataaaaac | ttaaaaccag | gacctccatt | 2160 |
| atatastasa | tracaccatr | gtagtctgt | agcttgacca | gtggagagtc | attcatttag | 2220 |
| gagaagagag | taracette | aactaccaat | actatotatt | tggtgtataa | tgcaaggaag | 2280 |
| cacaaycayc | cttcaatttc | aggatastaa | gatagataa | gaaaggatgg | cgccagaatt | 2340 |
| atagetasta | atraactass | aaatottoot | tttcagagga | agataaagca | tcttctttg | 2400 |
| anagaraa- | atgaactaaa | taadtaadta | aaagaaagaa | gtagctacto | tctcttttaa | 2460 |
| ggaggggggt | accidaty:0 | caartetese | ttttcagtgc | aacatttcaa | aaaatatata | 2520 |
| aaaccacgca | . caaaacaydd . taataattaa | aaggeeteag | acctattate | aaacwtatta | catttttaa | 2580 |
| cgccgcaatc | taataattaa | aaggaactt | | , | | |
| | | | | | | |

| catcagaaaa ttttgatctg acttttagtt tttttctgtt tttgataaac tgaatgttga aatgagctct gtgtgttaat | cagtttcaaa aaatgtctat agtttggtaa tcttaaagag tgggaaaatc tagtgcctat ttattttgtg gcttccaaag aaaagtgtaa aaaaaaaaaa | tttttttat agtattattt aaaaattgcc taaggattta gattttaact ccaacagccc ttatttaatt agaattggaa | taaaatattt tacctgctgt tttttactag ctgtggttag tatgtttgat agaattgtca ttctcagtgt aaaatataaa | catcacttgt tgtactacca aaagcctttg tcttacagaa atatagtagt cttatatgta ttgaatgtta tattcttaac | taaaacatat cagactgttg tatattgcaa gaaatgtgga aagggtttta agcagaaaac ttttttgtaa tcaagcaaaa | 2640 2700 2760 2820 2880 2940 3000 3060 3120 3180 3195 |
|---|--|---|---|---|---|---|
| <210> 864 <211> 1262 <212> DNA <213> Homo | sapiens | | | | | |
| ttccagtggt tatgctgtct tcaacaaaga aatcaaacat ctgtgtattc gcaataaaga aaaagatatt gggtggaagc cttactcagt gttttacaa taatatttt taatatttga aagattgcag ctgggaacag aaactgttt ttattcaaat tgtcaagatt cttaaacaga aaagactcct | cgcagatatg ttgtccctgt ctctgtcatc tgaaagtgca aaatgaattt ataggagctt cagatacgtc taatgtgaat tgacccaaac atggtaagtt tgaaataaaa taaacatttt gcagaacctt gaccattttt tgcttacttc ggaaataatt aaaaaagttt gttctggggg taccatatct tagggagtga gaaattgaaa | gcatctgtta tacttgacat gcaaagcaat gtagaagaag agtgaaggca ccagaggaag atagaaatat ttagaaggag acttgccaga cactttaatt tgcattttt aaaggtcatg atggtcccac agggaaaact tatatatcta taatactata acaaaaactt gtggtattaa ggatggaaaa | attcagttca tctatagaag gaaaaatgat tcactgacca aacttaccaa tgatggttaa ttcacaacat tatggcagtt aaaaaaggca ctattctaa tctacattta gaacaatcat agtaccatgt gattttgata agtgctgaaa aacttttcat gatgtataaa aattttgggg gagaaacact | cgtacagcag tgaacactcg aacactggaa tgggaatgtt cacaaataag aaaaaaaaa tgaaagcaca tgccgtgaac agccctattc tgtttaaat taactggtct catttccct gaaatgagga gaaccgacta tatatttctc tgttagcgcc gcatgaatat gtggttgatt ggttaataca | agcatgtagt aaagaactgg gtgaaatttt gttcttgctg caaagtggtt actttacatt agcaataaaa ataaaagatg aaactacttt tacagtgtac taagagtttt attgaatatt tcgcttgtag gttgagtatt ttctccccac acgcagtcct acacacagta aggattgaa gagtataaat | 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 1080 1140 1200 1260 1262 |
| <210> 865 <211> 388 <212> DNA <213> Homo | sapiens | | | | | |
| <221> SITE <222> (388 | | or c | | | | |
| ggcattggca gctctcggtt cttccaaggt gccatagcta tcaatattaa | agaggtgcag ggagtggcgg taggtcccat tgagggttgg gtctaggaaa tttttttggt agggcggcct | ctcagcacag ggcacgtggg aactccacag agagcaaatg aatgtaatgc | ggaagttctc gctctggacc cctcagcctc gccgtgtttt | cagtgcccag tgcctgcctc ccaaagcttg tatattttga | gcccaggctt caagacagct accaggccca cttttgcatt | 60 120 180 240 300 360 388 |

<210> 866

```
<211> 408
<212> DNA
<213> Homo sapiens
<400> 866
                                                                       60
gccgctgctg ctggcgctcc tgtcgttggc tctttgccga gggcgtgtgg tgagagtccc
                                                                      120
cacagcgacc ctggttcgag tggtgggcac tgagctggtc atcccctgca acgtcagtga
ctatgatggc cccagcgagc aaaactttga ctggagcttc tcatctttgg ggagcagctt
                                                                      180
                                                                      240
tgtggagctt gcaagcacct gggaggtggg gttcccagca cagcactggc ctttcggaag
catcccagta gggttttctg aggctcgctg gtgactcatg ccctaattgc aatcctctgc
                                                                      300
ttttatcttg actttgaagg atctaacact gctctcttt ccaaagggga aaaaaagatt
                                                                      360
                                                                      408
catttgtttt gagcaataaa ctaatacaaa atgaaaaaaa aaaaaaaa
<210> 867
<211> 3014
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (614)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (619)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2968)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2989)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2998)
<223> n equals a,t,g, or c
<400> 867
cccacgcgtc cgcccacgcg tccgccagtg ttatcccgga gatggattga tgtctccatt
                                                                       60
gtatttaaac caaaatgaac tgatacttgt tggaatgtat gtgaactaat tgcaattata
                                                                      120
                                                                      180
ttagagcata ttactgtagt gctgaatgag caggggcatt gcctgcaagg agaggagacc
                                                                      240
cttggaattg ttttgcacag gtgtgtctgg tgaggagttt ttcagtgtgt gtctcttcct
                                                                      300
tecetttett ceteetteee ttattgtagt geettatatg ataatgtatg gttaatagag
                                                                      360
tttacagtga gcttgcctta ggatggacca gcaagccccc gtggacccta agttgttcac
cgggatttat cagaacagga ttagtagctg tattgtgtaa tgcattgttc tcagtttccc
                                                                      420
                                                                      480
tgccaacatt gaaaaataaa aacagcagct tttctccttt accamcacct ctaccccttt
                                                                      540
ccattttgga ttctcggctg agttctcaca gaagcatttt ccccatgtgg ctctctcact
                                                                      600
gtgcgttgct accttgcttc tgtgagaatt caggaagcag gtgagaggag tcaagccaat
                                                                      660
attaaatatg catnotttna aagtatgtgc aatcactttt agaatgaatt ttttttcct
                                                                      720
tttcccatgt ggcagtcctt cctgcacata gttgacattc ctagtaaaat atttgcttgt
                                                                      780
tgaaaaaaac atgttaacag atgtgtttat accaaagagc ctgttgtatt gcttaccatg
tccccatact atgaggagaa gttttgtggt gccgctggtg acaaggaact cacagaaagg
                                                                      840
                                                                      900
tttcttagct ggtgaagaat atagagaagg aaccaaagcc tgttgagtca ttgaggcttt
                                                                      960
tgaggtttct tttttaacag cttgtatagt cttggggccc ttcaagctgt gaaattgtcc
                                                                     1020
ttgtactctc agctcctgca tggatctggg tcaagtagaa ggtactgggg atggggacat
```

```
1080
tcctgcccat aaaggatttg gggaaagaag attaatccta aaatacaggt gtgttccatc
                                                                    1140
tgaattgaaa atgatatatt tgagatataa ttttaggact ggttctgtgt agatagagat
ggtgtcaagg aggtgcagga tggagatggg agatttcatg gagcctggtc agccagctct
                                                                    1200
gtaccaggtt gaacaccgag gagctgtcaa agtatttgga gtttcttcat tgtaaggagt
                                                                    1260
aagggcttcc aagatggggc aggtagtccg tacagcctac caggaacatg ttgtgttttc
                                                                    1320
tttatttttt aaaatcatta tattgagttg tgttttcagc actatattgg tcaagatagc
                                                                    1380
caagcagttt gtataatttc tgtcactagt gtcatacagt tttctggtca acatgtgtga
                                                                    1440
                                                                    1500
tctttgtgtc tcctttttgc caagcacatt ctgattttct tgttggaaca caggtctagt
ttctaaagga caaatttttt gttccttgtc ttttttctgt aagggacaag atttgttgtt
                                                                    1560
                                                                    1620
tttgtaagaa atgagatgca ggaaagaaaa ccaaatccca ttcctgcacc ccagtccaat
                                                                    1680
aagcagatac cacttaagat aggagtctaa actccacaga aaaggataat accaagagct
                                                                    1740
tgtattgtta ccttagtcac ttgcctagca gtgtgtggct ttaaaaacta gagatttttc
                                                                    1800
agtettagte tgeaaactgg cattteegat ttteeageat aaaaateeac etgtgtetge
                                                                    1860
tgaatgtgta tgtatgtgct cactgtggct ttagattctg tccctggggt tagccctgtk
                                                                    1920
ggccctgaca ggaagggagg aagcctggtg aatttagtga gcagctggcc tgggtcacag
                                                                    1980
tgacctgacc tcaaaccagc ttaaggcttt aagtcctctc tcagaacttg gcatttccaa
                                                                    2040
cttcttcctt tccgggtgag agaagaagcg gagaagggtt cagtgtagcc actctgggct
                                                                    2100
catagggaca cttggtcact ccagagtttt taatagctcc caggaggtga tattattttc
aqtqctcaqc tqaaatacca accccaggaa taagaactcc atttcaaaca gttctggcca
                                                                    2160
ttctqaqcct qcttttgtga ttgctcatcc attgtcctcc actagagggg ctaagcttga
                                                                    2220
ctgcccttag ccaggcaagc acagtaatgt gtgttttgtt cagcattatt atgcaaaaat
                                                                    2280
tcactagttg agatggtttg ttttaggata ggaaatgaaa ttgcctctca gtgacaggag
                                                                    2340
tggcccgagc ctgcttccta ttttgatttt ttttttttt taactgatag atggtgcagc
                                                                    2400
atgtctacat ggttgtttgt tgctaaactt tatataatgt gtggtttcaa ttcagcttga
                                                                    2460
aaaataatct cactacatgt agcagtacat tatatgtaca ttatatgtaa tgttagtatt
                                                                    2520
tctgctttga atccttgata ttgcaatgga attcctactt tattaaatgt atttgatatg
                                                                    2580
ctagttattg tgtgcgattt aaactttttt tgctttctcc ctttttttgg ttgtgcgctt
                                                                    2640
tcttttacaa caagcctcta gaaacagata gtttctgaga attactgagc tatgtttgta
                                                                    2700
atgcagatgt acttagggag tatgtaaaat aatcatttta acaaaagaaa tagatattta
                                                                    2760
                                                                    2820
aaatttaata ctaactatgg gaaaagggtc cattgtgtaa aacatagttt atctttggat
tcaatgtttg tctttggttt tacaaagtag cttgtatttt cagtattttc tacataatat
                                                                    2880
ggtaaaatgt agagcaattg caatgcatca ataaaatggg taaattttct gaaaaaaaaa
                                                                    2940
                                                                    3000
3014
aaaaaaaaa aaaa
<210> 868
<211> 1572
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1516)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1561)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1567)
<223> n equals a,t,g, or c
<400> 868
atgggggaac gtaattktra gcgggatgcg ctctctttag aatcgcgtcc tcccaaatgc
                                                                      60
tecegeegte ceattacegg aatggggace atteggetge tgeagatagg aetttetete
                                                                     120
ccattcttta cttttttatt agccaatcaa agtggcttcc gaaagccatt tgtgatttgt
                                                                     180
                                                                     240
gaaaaatagt atctttcaaa atgctgagtt gaagcatctc gctcattgct ccttgaattt
attattctaa tctcaaccgt agagctggaa taatgcagct attaagttgg ggggcaaatt
                                                                     300
```

<213> Homo sapiens

```
360
cgtttctctg gattaaattt tttttcctcc ccactccctc attgcatcag ccaaggaagg
                                                                      420
tgcggacctg caagagatct gggggtgggt gagagaggta gtgagcgtcc tgaagggctc
cttgagggac ccttggatag gcgagtggtt tggtctcccc agtcttatct tccccagata
                                                                      480
agatgcccta atgactgcct gctggctggg aaagttaccc cgcccaatta gggagaattc
                                                                      540
                                                                      600
aggacaggtt gtgccacagt ctagaagtaa aatttccggt gagctgcccg cagcgccgtc
                                                                      660
ccattctccc cgctgcccat tgtgaaaagc tgggccagcg cttccttgtc gtaattttta
                                                                      720
actacctgtt ataaaattta tgggtgggtt tgtgaaaaga aacgaggtcc ctgcatccgg
                                                                      780
cctagggaac tgcttttctt actatggagg aagtctgggg aaggcatgag gtatcccctc
                                                                      840
ttggtcaggg wtgaggyacc caaccattga gattcccatg ccagcttgat gcgggaccaa
                                                                      900
gtggagagat gccggccttc aaatctcgag cccgtgggga gagtgacctg cctgcaaccc
                                                                      960
ctccccggc aaatagtctc tatgggggaa tttattctgg actacccwam attaggggtc
                                                                     1020
tggaaaaaca ggctgctcga aattttagca cagawkgtgk aattcagggc agtaaaaggt
                                                                     1080
tatttttca ggcctcggta gtacatccca gctgcccaga cattgaatca ggaaattttt
                                                                     1140
ctgagaaagg caggtgggta tgggcaatct gacacgatcc aaaaggctta ctgccttgca
                                                                     1200
cccctcccg caaaaaggaa gtagagacca agatcttggg ctttaatttt atttttaatt
                                                                     1260
gtaaaaagat ttcaaataag ccaccatttg aactgggaag ggaaactagg gatggtcttg
                                                                     1320
qqqqaaaatg tcattctctc taagaaaggg accccgggga tgtgggtcgt tttgagggtc
                                                                     1380
ctaqaaqttg accccaattc tcacctctcc tgctgcactg caggattgcc cagggtaggt
                                                                     1440
ctaqtcccct aggttcttca gaccactcca ggtcaggttt ggttgggtgg ctgccagtgg
                                                                     1500
tcttccacta ctgttcctgt ctagggtgga gtaggagctt tcagggggtac ggcatagagg
                                                                     1560
ggatgttgtt ctcttnactt aaaaaaaaaa aaaaaaaaa aggggggccc ccccaagggg
                                                                     1572
ncccaantta ac
<210> 869
<211> 1207
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1206)
<223> n equals a,t,g, or c
<400> 869
tccagaatga gtgctatgac agccccaaag cattctggtg ggtaagtgta ggttttgaac
                                                                       60
ttgtccttga aagatggggc tttggataag caaaggagag cagcaagggc attctaggta
                                                                      120
ggaggaatga tatggggaaa ggtttgggga taagaaaata caaaatattt aggaaagata
                                                                      180
gcagatcact tttgacatag aagaacggaa aataggtcag aactttaatg cttctgatca
                                                                      240
aagataattg acaatcttct agaattaaaa tagaccatgg tgtgattagc gggaaagaag
                                                                      300
tgactatgga actaatgaat gttaggacca gattgtggag agttttgagt gtcaggtttt
                                                                      360
tgggattcat ccacgttgtt gtgtatgacc tcctcccttg ctgaggagta ttctattgta
                                                                      420
atacacacaa tttatccatc tgctctcctg ttaattaatt aacaagggtc atttccaggt
                                                                      480
tagaggtatt acacataata aagttactct aaatattctt gtataggtct tttttgtggt
                                                                      540
tttacggtct catttctctt gagttgatac ctagaaatga aagggtcata gcacaggtat
                                                                      600
atgtttagtt tcataggaaa ctgccatacg atttcccaaa ggagttgtac cattttacac
                                                                      660
tccttccagc aatgtatgaa ttttggtttg ggagcacata tatttaaatc aggaatctga
                                                                      720
                                                                      780
aagatcgatt tcaccatagt gtaaatggat ggagtggaag gaactgaagg taaggggtca
                                                                      840
atgcaggagt ccacgcatga gctactaagg gtctgcactc aagcggccac acagggtgag
                                                                      900
aaacgaatga gctattttgg gagtgaaatt taagtgaaat tctatagaaa tagaggaatc
                                                                      960
aaagttatct cgatttcaag cttgagggaa gcctctgttg gcggaaaaga tgggtttctt
                                                                     1020
ctggggtgtg tttacagtga ggggccatct cactggcaat gtggaagagg tcggatctag
                                                                     1080
agaccaatct aaaagtcacc tggctagaga agacaatcaa atccagaagt tcatagaaca
                                                                     1140
aaataaaggt gaacataggg cagctaaagc ctaaacattt tgtaattaga aagcagttag
                                                                     1200
ggtgtgttaa aaaaaaaaa aaagggcggc cgctctagag gatccaagct tacgtacgcg
                                                                     1207
tgcatnc
<210> 870
<211> 839
<212> DNA
```

```
<220>
<221> SITE
<222> (833)
<223> n equals a,t,g, or c
<400> 870
ataaacatct tcattgtcag ttctcaaaat gactgaaatt gttttcatgg taaaagttaa
                                                                      60
tatactaaag ggttcctttt tttttaatgt ttacatttat ctctatgttt acctttttag
                                                                     120
tcacattgac ctgctggctg aatacctcaa atagtccagt agagggcagt ccaccaggca
                                                                     180
gaaaaggtta ggcgttttgg tttcacatct ttgctgggga ataatagggg aaatggctgt
                                                                     240
ttttgctaat ttttagctaa tatctagcca ggagagcaag cacataggac agactgaaag
                                                                     300
actgtaattt tacacaatac acatggctta attattttat tgggatacag aaaaatataa
                                                                     360
attctggaca aataagtcat atacctgttt tcagtcctaa catttaagga ttcttgagtc
                                                                     420
ccaatcacat aactgtggtg ttactctgtc atttatatgg tgtcaaaagc acttgatgag
                                                                     480
taaacccagt aacatctttt tgagtgtttc cataatgcat tttccaactt gaaaacaata
                                                                     540
attgaaaaat agccttattg tatattttat gccatgacta aaagtgccat ttttactgat
                                                                     600
gctattagac tgataatttc ttgaagtgaa atttaacctt tttttctctt tagtattatg
                                                                     660
tttataatgc catattttta gaaagcattc cagatcaggc atggtggctt acacctgtaa
                                                                     720
tcccagcact ttggaaggct gaggtgtggg gattgcgtga agccacaagt ttgagaccag
                                                                     780
cctggttagc aaggcaagat ccccaactct acaaaaaaaa aaaaaaaaa aanaaaaaa
                                                                     839
<210> 871
<211> 1332
<212> DNA
<213> Homo sapiens
<400> 871
taatctatga ctttttggta caagaacaat ggaaaaagtg aattaaggta atgaacaaaa
                                                                      60
cctttcaccc acttaaacat tttccagttt tgagattcct cttcgtgttt gtggtgtctt
                                                                     120
ccccttgtta ccccttctgc cctttttctc tgactatggt aatttggtct ttaggctcat
                                                                     180
atcagtctcc ccgagacatt ctgcagtcat tatcaccttt ttgggtggat tttattttgt
                                                                     240
tttattttgt tttttttaaa aaaataactt tttaacattg gtgcatattt gcttgggata
                                                                     300
gagcttgtgt aatttaccaa tcgtattgat tgtaagtgat tgtgccctgc agaggtatat
                                                                     360
ttaacaagac aaaaataatc ttgggtaata aaggagccca tgagatttga gtcaggttgt
                                                                     420
aagtgaaatc acttacactt ttggatagaa tttatactcc tgctcttata aatcagtggt
                                                                     480
agacttacca ttttttaaag ttttcttgca tttttttgtt tttttattgc cacagctccc
                                                                     540
                                                                     600
tattctttct tgcctgcctc caccccctg ttcaggaaaa aaaaaaattg agccttaaag
                                                                     660
tgacagctga ttttttaatt gctgaatttt gtgaaatttt actttttcca agtgtttcca
actttaaaaa gagaagtgaa gacaaatagg ttggaatggt gaagacaaat gggttggaat
                                                                     720
                                                                     780
ttcacaggct gtgaataatt ccttaggatc tggcaaaccg tgaagtctta tttgaagacc
ttatctcctg agagttcttt tggagtagga aaaagaacct atttgaaata gaccgttttt
                                                                     840
                                                                     900
ctcttgtttt taatctgttt aatatttctg atttttaagc agctttcaaa acaagtgtgg
                                                                     960
tggaaaaaaa gaaatagtag taggaagatg tttagggcag cagaactctg ggtctaaata
                                                                    1020
agtacatgtt cccacttgtt gccgattttt gagagtacta gggccatctt tctcaatttt
gtattatttg tgtgcatgtt tatatcaaag atgcccattt tgttaaaatg ctatttcctt
                                                                    1080
tattaccttg gaaactgact cagcctcatg ttgctcctaa ttagtgttta aggctcccat
                                                                    1140
                                                                    1200
gagttgcaga taaaatgatt tattttaaca agtagaagga ggtgattcac cttttggatt
                                                                    1260
gtaaatatat gaaaatgtct acaaggtctt tatctgcttt ctgtcagcat ttatattaaa
                                                                    1320
1332
aaaaaaaaa aa
<210> 872
<211> 1978
<212> DNA
<213> Homo sapiens
<400> 872
                                                                      60
ggcacgagga gagagttgaa ggagctgaga cacttgccta tctgattgaa ccagatgttg
agctacagag aatcgctagc ataactgatc acctcattgc catgcttgct gattatttca
                                                                     120
                                                                     180
agtatcccag ctcagtgagt gccatcactg atattaaaag gcttgatcat gatttaaaac
atgctcacga actccgccag gctgcattca agctctatgc ctctcttgga gcaaatgatg
```

240

<212> DNA

```
300
aagacatccg gaagaaggtg agtctgggag aggggcgtcc cccagtcctg acagccagca
                                                                   360
ggcagggagt gacgtcaacc tgaaagtcgt ggtgaagagc actaacagtg actgtttgaa
tataataaag cagagtgact aaaggcataa ttgaagaatg aatgggaccc ggatttgggg
                                                                   420
                                                                   480
ggttgtttgt ttgtttttag aacatagagt ggcatggccg tgctggaatg acaaataact
                                                                   540
ggcgtgcttt ttttttgtgt cattaatatg aattattatg ttgcacattt ttgcatgtgt
                                                                   600
tctgataaaa atcaattcta gcactgtgaa gcttcagaca ccttgaaagt cctaacatta
                                                                   660
gaattgtaaa tgttatttat ggaaatacct tccaatgcta ttgagaaatt caaatctcta
                                                                   720
ttgtatattg ttctttgata tgtggcttag ttttatgttt tgatttttt tgctactgtg
                                                                   780
caagtttaat gtgaataaaa tctttgtgga atgatgattt tatgtttagt gagtggtcat
                                                                   840
ctgaattttc cagctcccca gaaaatgtat gcactggtat agcaccctta tgttactaaa
gcctagtcta acactgaact catgttcttg atgagaatac ttctagatga ggagtatagt
                                                                   900
ggtaagtaag ctctgacttg gctccttcca caaaccaaaa agctggaact taccactcaa
                                                                   960
                                                                  1020
aaacatgtat aacctaataa attctacaca aggctttcaa gaccatcaga gagcaaaacc
acatgttctg tcttgaggag ccatagcaga aagagcaaat tagtcattat ttactgaaca
                                                                  1080
tgatgattta ctaaatctct ccatctgcat tagtatttta aggagcactg tgagagaaat
                                                                  1140
                                                                  1200
cacaaagtat tagagtttac catgattcag agaagttctt cagscctgta gaaagaggag
                                                                  1260
tatggaacaa ccttacattt gttgaaatwa cttgaaaagg aaccawttct tgaagaaact
                                                                  1320
gaagtaatag caataagatt tgatgtgtga gtagctttga tttaaaaatca atgcaaaaag
                                                                  1380
cacaactaat aaattgaatg tttccatgta cctcacttta tttcagttam caagatactt
tgacttgaag tgtttttagt gtatccctat gaaaatcatt tttggtacat ctaagttttc
                                                                  1440
                                                                  1500
acttataaac tgttatttca aagcaaacat actagtgata tatatatgat ttatggatgt
                                                                  1560
tgacgccaat gttcagtttg ggtacgtkgg tgtattgcaa ggggagaggc ttttataaca
                                                                  1620
atagatttga acatttttaa aaaattggac tgtgtaactt aaatacacaa ttatttggtt
taggatggtt attagggccc attagaaaca ggagaagtat tttacccatt cttaaagctc
                                                                  1680
                                                                  1740
taaaaaacca tctcatggac tgaaaggtag atagacagat ggaccacaat gggaaatagg
atgtccattt gtacttcttt gtactttttt gttaataaac tgttttggaa ttaatggctt
                                                                  1800
aatttgtgat atcatgttct agaaatacct gcaacatgac agtctaatca gtagtctatt
                                                                  1860
aaaacttgta ttcataatgt gtataatttc ctggtaaggc taactcctga tcgtttctgt
                                                                  1920
                                                                  1978
<210> 873
<211> 626
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (617)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (618)
<223> n equals a,t,g, or c
<400> 873
ccacgcgtcc gcttcactag gattgtctta tcacctttat tagataaatc atgaagtgtc
                                                                    60
cctgtgaaat tgaagtgaaa ctatctctgt aggacttaag agaatagcta aaaggtgtga
                                                                   120 .
cttgccttat tgaactgata ctggcatatc tgactgtaag cagtaggttg aagatatcat
                                                                   180
tttatgaatg tggagaattc tacattgaaa cagaaaatac ctgggaatga agattaaaaa
                                                                   240
tgtagctgct gttatttgct tggtgattcc cctcttgctc ttctttagtt tgaaaaaaca
                                                                   300
aaaacgtggc cttggaattt tcattttgat gcagaaattt tgaaattgaa aatgtgcatg
                                                                   360
ttttggtgca caaaatcctt ctgtgggcaa aactttgttt ttgttttgca cagtaagaaa
                                                                   420
caataggcaa gcgttatgtt tttggtaagt taactatgaa agctttctta tttttattat
                                                                   480
taaaaatgta acaatttaac ccacaggaaa aaaaattact ttgtatgctt gtttgaaccc
                                                                   540
600
                                                                   626
aaaaaaaaa aaaaaannaa aaaagg
<210> 874
<211> 1882
```

```
<213> Homo sapiens
<220>
<221> SITE
<222> (1270)
<223> n equals a,t,g, or c
<400> 874
aaaactataa agatttttta aaagctctgt ctcagctaga atttttaaga ttataactga
                                                                      60
                                                                     120
acagtatage cettttagtt gtttgaaaat tacataatga tteaaaaget tgttteaetg
                                                                     180
cctttcccag cactaagaaa attaacaatc atttctttta atwtccttga atcagagcca
                                                                     240
ttctaaagtg actctggacc agcaattctg agctatgatt tcatgataca tgtattaata
                                                                     300
tctaaatgag ttgtgagttg acataagaac catagttcca taataattat cttcaaatca
                                                                     360
atggatatct taaatgtgtt tttttcttcc ttagagatta ttattaaact gatgtatttg
ataataaaga attttaggac tgagaaagtt aagtttttct taccaataat aagatattga
                                                                     420
                                                                     480
aatatataaa ttataaaaca gaaataaaat gaaataaagg aggttatccc taaagtcatt
                                                                    540
taccttagtc acttgcaatt aaatatggkt acttcggrag ragaagtktg gccctaaagc
                                                                     600
tactgtaaca tgaatcatgc cctaatgtgc actatatatg aactactttg gtcagaaggc
                                                                     660
agcggcgggt aaggatggct tcctctcaca gtgcttctta ggctatccat ttaccaagga
                                                                     720
attctaatct ctttctctca cttcaccagg aaaggaggga gtttaagata tagaactggg
                                                                     780
catgctagcc tcttttttcc cttttgtgga tttgtcataa ctgcagagaa ccgatgttgt
                                                                     840
ggtctcttgc cagctacatt gtgaaccttg cagtgaaagt tctttgcctc tgcaaaggga
                                                                     900
gatttgtgct tgtgcagaac tgcccatgcc ttagtaagca ggtctgtcta attctaagtt
                                                                     960
caatatctgg tggctattgt tggcataaac ttaaagtaca tcctctaacc tagccttttt
                                                                    1020
cagcagtaaa cttaaaatat tgaatctcca tctgtctgtg tctcaagtgg ttcagaggtc
                                                                    1080
aggagaggag arggacatta wtttatgact ccctccaaac tttaacaaga ctagtgcaga
                                                                    1140
twawatttcg aagtaagcat gagrtatatt aaaaaccaca tgtgggaaty cttycctaat
tttagaggtt tttttaaat aatggaaatt ctattgaaat tgagtagtgt taattacaag
                                                                    1200
gcaacaggta aacatttgtt caggatattt aaaaggtctg ctgagttgga attgtgacag
                                                                    1260
                                                                    1320
accacattgn tgactctaga ttgaawtgga agggaagaat gtgaaatgaa ttaggatatc
                                                                    1380
ctctgttcac ctctattaac tttcttaaat gagtataact tagaaataat aaaatgcaag
                                                                    1440
tattttaacg ttatagttgg gagagttttg acaaatgtaa acacccactt caccaccact
accatectga tatagtgtgt gtecateace caaaaagtte tetaaageee ttttgeagtt
                                                                    1500
ggttcccctc cacctgaaca gccatcccta gtcaactact tttctgcttt ctgtggctat
                                                                    1560
                                                                    1620
acgttagatt tgacttcaga attctagagt ttgaaataaa taggccatat aatatgcact
ctttttgtgt ctgacttttt ttttgcttaa catgatgctt ttgaaaccca tccatgttga
                                                                    1680
gattcatcca tgttatcatg tgtatcaata ataagttcct ttttattgct gaatagtatt
                                                                    1740
ctagtatata gatataccac aatttgttta gctgttcacc tattgatgga catttaggtt
                                                                    1800
                                                                    1860
gtttcaagtt ttgatctatt atgaataaag ctgctatata tataaatcac aaaaaaaaa
                                                                    1882
aaaaaaaaa aagggcggcc gc
<210> 875
<211> 820
<212> DNA
<213> Homo sapiens
<400> 875
                                                                      60
cccgggtcga cccacgcgtc cgaacaacga tatggcagga gccagtcttg gggcccgctt
                                                                     120
ctaccggcag atcaaaagac atccggggat catcccgatg atcggcttaa tctgcctggg
                                                                     180
catgggcage getgegettt acttgetgeg actegecett egeageeeeg aegtetgetg
                                                                     240
ggacagaaag aacaacccgg agccctggaa ccgcctgagc cccaatgacc aatacaagtt
                                                                     300
ccttgcagtt tccactgact ataagaagct gaagaaggac cggccagact tctaagccag
gctgggctgc cagtgccatg caagccacag ccagccagcc catccacttc ttccactcct
                                                                     360
                                                                     420
ccccgcaggc cccaaggcat cactccggcc accctgtccc gctactgctt acacaggccg
ggttcccacg cagaggggag gctgctccac ccctactctc ctcccttgct cccagcagcg
                                                                     480
                                                                     540
gaagcgcctc tgacccttgg cttgagtccc acgtggggga ggaggaggca ggcagcacca
gcagggcctg cccaggctgg ggcacctttg cctcctgagg cgcagcgcac tcctccctg
                                                                     600
                                                                     660
cccaagecta etgecteeg etgeegeeag tacceetee agecceaeae etgggeetee
ccctgccact cccctccctt gctcccctct gtccccaggg atcaaacaga agcagccgtg
                                                                     720
780
                                                                     820
aaaaaaaaa aaaaaaaaaa aaaaaaaagg gcggccgctc
```

<212> DNA

<400> 877

<213> Homo sapiens

```
<210> 876
<211> 2485
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (2479)
<223> n equals a,t,g, or c
<400> 876
gatttacaca gcatcatgta ttgaatattg atttctcctt tttcatagca ttgaaaaggt
                                                                       60
gattatatat gtgttggtct agttctgtgc tatttttttt ccactggcct gtttgtctat
                                                                      120
cctttgttta ctaccaccaa gctataactc ttgatagctg gtaatgaagt cttccaattt
                                                                      180
tgttcaccct caagattgtc ttctggcttt tcgtatttcc aaataaattg taaaattgat
                                                                      240
                                                                      300
ttgccatttt tcacacacac accccttgct ggtttcttga ttgggattgc attaagtctt
                                                                      360
ttgatgattt gagaattgac atccttacag tattgagtat tctaacctgt gaatatggta
                                                                      420
gaaaccattg tgtattcagt tatttgattt ctttcagtta tgttttataa ttttctgtgt
agaggtcttg tatatgtttc attagattta ttctttggta tttgtttttt gatactatta
                                                                      480
                                                                      540
taaatggtat tgttttaaat ttttattttc taattatagc aacttgtatg tagagtcatg
                                                                      600
tgccacttta tgatggggat atgagaaatg cattgttagg cagtttcatc atgcaaacat
                                                                      660
catagagtgt acttacgcaa atcatgcaaa catcatagag tgtacttaca caaacctaaa
                                                                      720
tggtacatgc tgctacacac cttagctgta tgatatagcc agttgctcct agactgcaaa
                                                                      780
cctatacage atgttactet actgaatace gtaagcagtt gtgacacaat gatgagtatt
tgggtatcta aacatatcta agcattttta aaatgtacag taaaaatgta aaaagtaaaa
                                                                      840
                                                                      900
catggtacac ctgtttaggg cacttaccgt gaatggagct tgcaagacta gaagttgctc
                                                                      960
tggaagaatc agtgaatgag tgaatkctta ggacatcact atacactact gtagacttta
                                                                     1020
taaacactgc acacttaggc tacactaaat ttatttttaa aataaagtaa ttgcaatatg
                                                                     1080
atgttatgac agctatgatg ccactaggca gcagaaattc ctgagctcca ttataatctt
                                                                     1140
ataagaccac cgttgtatat gtgatccttc gttatgtggg acatgactcg atataaaatg
                                                                     1200
gattgttata ttgacctttt atctgatgac ttaactaaat ttacttatta attttactag
ttatctatag tctcattttt cctgtgtaca caattaattt atttgtaaat actaaatgtt
                                                                     1260
                                                                     1320
tccttttttc attactcata tatttttttc ttgccttact acactgccta gtaaaatata
taaaatatgt gcttcacgga aaggggactt tgattaagga catgcctcct tcagagcttt
                                                                     1380
ttcttttccc cctagtattt ccaacttggg gatgtttggc atcgacgaat ttactgcagt
                                                                     1440
gattaaccct cctcaggcct gcattttggc ggttgggagg ttccgacctg tgctgaagct
                                                                     1500
cactgaggat gaagagggaa atgccaaact gcagcagcgc cagctcataa cagtcacaat
                                                                     1560
qtcaaqtgac aqtcgagtgg ttgatgacga actggcaacc aggtttctta aaagttttaa
                                                                     1620
aqcaaaccta qaqaatccta tecgaettge ctagteetca aagataagaa gttggtgtte
                                                                     1680
agcttagttg attcagtagt tgttaccaag aaacatatgt tataggaaaa caacttggta
                                                                     1740
tttaagtatg aagtggatga aatgtttatt tatttaaggt gaaagcattt gacccagggt
                                                                     1800
gtcttcatct tcaatttggg tttaatgtta tagaaataaa tgatgataaa ctctaactaa
                                                                     1860
taaaqqaaaq aqaatatttq qttactcaga tccattttta acctctggtg ctgtataaag
                                                                     1920
ggaatattaa actagatgta aatcaaagta tatgtttggc tcatttgagc attttggaat
                                                                     1980
atttgagaat gtatgataca tgtaaaatta aaaaaactat tagaactgta ccataattat
                                                                     2040
gttgaaggta gaagtgatct tcaaagagat ggccattaac ttagcagtgg gacctcactt
                                                                     2100
                                                                     2160
ttacaagcac tgctctagat atacttgaag aatttaatak gtacagaagt ttattctgga
                                                                     2220
taataaataa ataaggatca cactgtatta ggggttatgg caacattatt gaatttttta
tgtacataaa gccatatgtt tagggtggtt tctatctgtc ttgtttttca cttatataac
                                                                     2280
actgtgaact tctaaagmaa gaggataaaa gaagcatgaa tgaaaagaat gacatttcaa
                                                                     2340
aaaaatggtt caatgaaaaa ctatagctaa aatatgtaaa cctttctagg taaaccgctt
                                                                     2400
gccttcatct tgagtcggaa tatatttaaa taaattgtgt tatctcttgc caaaaaaaaa
                                                                     2460
                                                                     2485
aaaaaaaaa aaaaaaaang ggggg
<210> 877
<211> 1793
```

<400> 879

| ccacgcgtcc | gatttgtccc | tattgttcta | tttttaaata | aatatacaat | cattgttttg | 60 |
|-------------|------------|-------------|------------|--------------------------|------------|------------|
| cattgaaatg | catatttgta | cattttattt | gataatatta | ttttgggaaa | ttgtaatctg | 120 |
| ttgttttgtt | tgtttgttaa | gggaagcacg | aagaagaatt | tacaaatgtg | aataaaattg | 180 |
| tttaagatta | ccaatagttt | cttttctgga | cttgaaatag | ttacgtttct | aaatatgaga | 240 |
| aaaataactt | tgcctaaaat | ttcagtataa | tgaccaggtc | ttctctccat | tttagagaag | 300 |
| cagtccaatg | tggaacagat | aagacggcag | cgatccagtg | aggtcaattc | cccacagagg | 360 |
| aaagctatgc | atacctaact | taatggaagg | taaacttctc | ttcaattaat | gatgtcctcc | 420 |
| ttttctcaag | gtgtccaaag | acaggaggtg | gtctgtaaaa | ggttggatga | caactccatt | 480 540 |
| gtccagaaca | attactgtga | tcctgacagt | aagccacctg | aaaatcaaag | agcetgeaac | 600 |
| actgagccct | gcccacctga | gtggttcatt | ggggattggt | tggaatgcag | ttatasaaaa | 660 |
| gatggtggga | tgcgcacaag | ggcagtgctc | tgcatcagga | agatcggacc | gaataaaa | 720 |
| gagacgctgg | actacagtgg | ttgtttaaca | ttagagtagt | tcgaaaaaga | tccasatat | 780 |
| aaccagtcat | gtccaccaca | graggragger | tagaagaga | ctgagtgtac | taagacattc | 840 |
| ggtccaggat | tcaagcatcg | gattgttetg | cctcctctcc | gtgacctttc gcatccgctg | cantttagg | 900 |
| ccagctgcac | aatgteeaga | ggaaagcaaa | gactagaaca | agtgttctgc | tcagtgtggc | 960 |
| egetgeeete | agettageta | atactagga | aggaggggg | tcagtgtcac | ttctgggatg | 1020 |
| taggggagg | ctgagagaa | acyccygaag | tccccaaaa | cagcatcaga | atacettet | 1080 |
| agaggagg | acccacacaa | tataacagga | tgaaacagtt | tcaagtaagc | cttgaattga | 1140 |
| agagggagce | acycacagaa | attctatttc | atagcacatc | acaatactgc | tactactcta | 1200 |
| taccegagea | cataactaca | tgatgcccta | ttcctaaata | ataacaatag | cattgtcagt | 1260 |
| ggagggtggg | ccaccatage | agaccttcca | aaagtagtga | gctacataga | ctacttaggg | 1320 |
| aaccccaggg | aaactggtac | cctacacctg | ggagcagtat | ctgccactgg | gataaagtcc | 1380 |
| tactaaaaaa | ggaacggtaa | atgtacccta | atgattaaac | cccgtgagat | acatatgatt | 1440 |
| tccaaatagt | ccatttcatt | aggaactttt | ttgtttgaat | gaatgtcaca | taggtatcct | 1500 |
| cagtaacaca | gaacgaaatt | acctttgtat | tattgtgatt | agttgttgct | tattattta | 1560 |
| tactcagtaa | taatgtggta | cactgttaat | ttttttgctt | ttgtaaatta | tattctaatt | 1620 |
| tattgccatg | tttcctaaca | cttgtcctac | attcattctc | ctgcttgtaa | tgaaaatgaa | 1680 |
| aaaatcattg | taacacttga | tggagtgaaa | ttccacgcca | ggcacagaat | ttttttgaca | 1740 |
| tagataattt | agtaaaataa | aaattcagct | tataataaaa | aaaaaaaaa | aaa | 1793 |
| | | | | | | |
| <210> 878 | | | | | | |
| <211> 1005 | | | | | | |
| <212> DNA | ŕ | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 878 | | + | totataoaaa | + | aagaagtgt | 60 |
| ggcagagcca | gattaccctt | ccctaataaa | gaaggaatag | taaggaaaga | toctasasos | 120 |
| atagatatat | ttaaaataga | gaacacccc | tttaggagga | atgatacttt aattattgtt | tatcttqctq | 180 |
| ctctaaaaya | adadactet | ttaatttaga | tacactasaa | caaaggtagg | caaactacaa | 240 |
| gatatttat | acgaacagcg | cacccattca | tttactatta | tctaagctgg | ttttgcacta | 300 |
| caactgagtca | attaataa | tacaacaaat | cctttacaga | aaaagttttc | tgacctcaat | 360 |
| totaaantaa | ttataataaa | gagetggagg | actttcttc | cctttatggt | aatttttqa | 420 |
| actacaaaaa | accttacag | aaatgggtga | agggattaat | cttttaaaaa | taaatrctat | 480 |
| atattaggaa | aataaaaaat | attttagagc | caagttaaca | agtacttcag | caaaacatgc | 540 |
| tagttttatg | caggggattc | tgtattccaa | atggatacaa | tccgacatat | ataaaagaaa | 600 |
| cagattetta | actattgact | cttatttagc | aaatgcaaca | gacaagaata | tccaacttga | 660 |
| tatttataaa | aggtagactt | tttccaaaag | tgtataagct | caaagaaaaa | atgcaacctg | 720 |
| tcaattaata | tatactatgt | aatatatatt | attgtgtatt | tatgattagc | catcataaat | 780 |
| gcccattgct | tggcctttaa | gaataatcac | aaaatattta | tattaaatta | tacaaatttg | 840 |
| ttgcagaagt | gcctgtgaga | gaaatcttca | aaagacaaac | ctggtcaaat | aataataatt | 900 |
| ttaatgtcaa | tgatttttt | tgtctgactc | atctgagtta | tatttagttt | tcaagtggca | 960 |
| ataaatttat | ctaccttcww | waaaaaaaa | aaaaaaaggg | cggcc | | 1005 |
| | | | | | | |
| <210> 879 | | | | | | |
| <211> 384 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |

```
gacccacgcg tccggcaaga agctagagag tgacttagga tacagtgtaa atatattagt
                                                                  60
aaattaagac agttctgcaa gatttttagg acttctattt ttcttctatt catcatttat
                                                                  120
                                                                  180
gaagtattct tgctagaaat agtttatgtc tctctatctt gctgagtgat gaatactcgg
                                                                 240
ccaggatgct aaaatgtggt ttcatgaagt atgttgtgtt tctgtctgtt cttgtttcct
                                                                  300
tccttqaaat gtgtaaaagt gaaaaacata ctaatcataa atcaggtatt catcataagc
360
                                                                  384
aaaaaaaaa aaaaaaaaa aaaa
<210> 880
<211> 548
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (537)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (539)
<223> n equals a,t,g, or c
<400> 880
cagggctgga tcattccttg ttcataattc tttatattat ttagtgtgtg tgtgtgtggg
                                                                   60
gttgcattta ggatagtcag tagcatcctg gcctctagcc tacagagacc agtagcatct
                                                                  120
cccatcatga caaccacrma tgtccgccag acattgccaa atgtcctctg gggacacagt
                                                                  180
tgcctccagt tgagaagcac tagtttaaat ttagaaaaca aattgggaag gatatataac
                                                                  240
aaattcgtaa cagtaccctt tgggatatgg gattggagga atggctttca ctcctcttt
                                                                  300
                                                                  360
aacataaaat ttttaaaact ggattttgcc tccccctaca gacatttttt ttttattttc
aactgtggtt ttttttccca ttttataaaa agattaacct tgaaaggtaa tatcacattt
                                                                  420
caattttagt cattatggat tttactgtgg aaggcagttc tatacaccta tggctgcttt
                                                                  480
tcaacctagt tttattggat tttgtttgac attgkgaatg kccyttttcc caaagangng
                                                                  540
                                                                  548
gatagaca
<210> 881
<211> 499
<212> DNA
<213> Homo sapiens
<400> 881
cccacgcgtc cgctctagca agtcacagca gtttagggtt gacatagcag agttcaaatg
                                                                   60
tctgactttt ctcactgttg tgtacttgtt ggccaggatg cctcatttga ctttgtctca
                                                                  120
                                                                  180
cccatagtca ttttcagatc caatggccca gtggcattct ggcagctctt ttctattctt
                                                                  240
cattcttggt tggaacctga aggtagtatg ctcctctggc tttggtctaa tatttgaggc
cactctgcct tcctagtatt tgtataatat ggccccttaa gcccctaccg tgatggctag
                                                                  300
                                                                  360
qaagtgggag tgaaagttaa ggctcttggg atggtgggag gaaagacaat tgatttattt
                                                                  420
ttgagcacgt atccaaaata aataaataat atatttataa acataaatgt atatgtctat
                                                                  480
499
aaaaaaaaa aaaaaaaaa
<210> 882
<211> 1289
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (433)
<223> n equals a,t,g, or c
```

```
<220>
<221> SITE
<222> (538)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (598)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (629)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (710)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1177)
<223> n equals a,t,g, or c
<400> 882
caagcgcgca attaaccctc actaaaggga acaaaagctg ggtacgggcc cccctcgag
                                                                       60
ttttttttt tttttttgt atttatctag ctaaactttt tgttttgcaa ttaacctaaa
                                                                      120
tgctcttctt caatttattt tgttatctag gctcagtatt aatttcaggt cagattttca
                                                                      180
ctgttttaag ccaaaatatc acaaaacgca gagtaacaac aacatgatct ttaaaataag
                                                                      240
tttaaagagg gtgtagccag aatctccctt actcctgatg tttcttagta attttcttag
                                                                      300
taatttactg actttctaat ctgctccttg gctattaatt cccacttgcc catgctgttg
                                                                      360
aacccaatct ctctcagaca ttgcaaaatc ccattgtagt ggtccctata cctagaacga
                                                                      420
ttgaataatt ttnctttaac aaatctcatc atccagatac acctgttgat gtgtaaaata
                                                                      480
ttacacaaac aaaaatcaaa aatttcaagt aaaaagtaaa cccaaacatt aaaggaangg
                                                                      540
                                                                       600
ctaaaataag aagttettet etetaaaete agtetaaeea teettteeee aaggtaanea
                                                                       660
ttgttttcct gacccttcca aataaatgng tatgaaatcc ggycctggaa tttgcactaa
aagamtggta ctatatacac cattcagcaa cttggytttc cycatttaan ggawatayct
                                                                      720
watagacctt ycwawayctg cacatacaga cccacytctt ccggtttcat agaagtgaca
                                                                      780
                                                                       840
taattcaact agtyccycat tgatgwakgt cctgcttttt tycctattgc aaataatact
gcaatatcat tgtgtgtatg tattatgcat gtatgttcat cttggcaaac tttgaaaata
                                                                       900
tatccttata gtaaattaca tgcatttaga agttttgatg caagtggaga attgccattc
                                                                       960
acaatgttcc catcaattta tatatccata aaaattgtat gaaagtaccc ttttgcttat
                                                                      1020
                                                                      1080
atcctagaca acattggtat caaaacgttt ttattctgaa agacaaaaaa ggaagaaaag
atataaaact gtttttattt gtgtttcttt ttttttttaa caacagaaac ataacacttt
                                                                      1140
                                                                      1200
cccaggggag ttgtcgatac atttcccact atcctcnaga ctagttctct cctcgtgccg
                                                                      1260
aatteetgea geeeggggga teeactagtt etagagegge egeeacegeg gtggagetee
                                                                      1289
aattcgccct atagtgagtc gtattaccc
<210> 883
<211> 1182
<212> DNA
<213> Homo sapiens
<400> 883
ttttttttt ttttttca gctttccaac atttattcca tggaatgagt gcacagcatt
                                                                        60
ttcatgaact acctcagggc tacatcagta caaaatagtt taaattagta aaataaagta
                                                                       120
gtttcaaagg gaaatcattg acgacttcag gataagtgcc accaccattt gggaacagag
                                                                       180
                                                                       240
gatagaaggt agccatgtgg ttattccatg atgcaggaat caggtcggca ggtggactgt
                                                                       300
cattgctgtc ttgcggcagc tggcctctgc cttcagggta ccaccgtctc caggacacaa
                                                                       360
atgggcagca gaaaaatgtc accttgttga tttcttcaaa gaggttgggt gacacctcac
```

| cattccatat | gaacatgtac | ccctcaggaa | ggccagccac | cagctccagc | agctcaatgt | 420 |
|------------|------------|------------|------------|------------|------------|------------|
| | tacggcactg | | | | | 480 |
| | aatgatcact | | | | | 540 |
| | cacaacttgc | | | | | 600 |
| | cagcagggtc | | | | | 660 |
| | actcagcact | | | | | 720 |
| | gttgtggaag | | | | | 780 |
| | | | | | | 840 |
| | tcttccttcc | | | | | 900 |
| | gcaaacacca | | | | | 960 |
| | gtcaaacgtg | | | | | 1020 |
| | attgtaatga | | | | | 1020 |
| | taccttgttc | | | | | 1140 |
| | aaacaccaga | | | | ecatectete | 1182 |
| cataggccag | aaaaggagga | atggtgatga | tgegetegtg | CC | | 1102 |
| .010. 004 | | | | | | |
| <210> 884 | | | | | | |
| <211> 1648 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| .400. 004 | | | | | | |
| <400> 884 | | | | | L | C 0 |
| | gcgttctaca | | | | | 60 |
| | gtgacaggat | | | | | 120 |
| | aagcattctt | | | | | 180 |
| | catttctcac | | | | | 240 |
| | ccttgccctg | | | | | 300 |
| | aagggctgtg | | | | | 360 |
| | cattctgccg | | | | | 420 |
| | atcatcagca | | | | | 480 |
| | aggctgcaga | | | | | 540 |
| tgctgctttc | aattactggc | atccagaaat | tgtgtattca | gggggcgacg | atggccttct | 600 |
| | gacaccaggg | | | | | 660 |
| gggtgtgtgc | agcatccaga | gcagccctca | tcgggagcac | atcctggcca | cgggaagcta | 720 |
| tgatgaacac | atcctactgt | gggacacacg | aaacatgaag | cagcgttggc | agatacgcct | 780 |
| | gggtatggag | | | | | 840 |
| | acagtggctt | | | | | 900 |
| | tcctgacatc | | | | | 960 |
| tcctggctgc | tcttccgttc | tctgcagcgg | gccccctcgt | ggtcctttcc | tagcaaccta | 1020 |
| ggaaccaaga | cggcagacct | gaagggtgca | agcgagttgc | caacaccctg | tcatgaatgc | 1080 |
| agagaggata | acgatgggga | gggccatgcc | agaccccaga | gtggaatgaa | gccactcaca | 1140 |
| gagggcatga | ggaagaatgg | cacctggctg | caggctacag | cagccaccac | acgtgactgt | 1200 |
| ggcgtgaacc | cagaagaagc | agactcagcc | ttcagcctcc | tggccacctg | ctccttctat | 1260 |
| gaccatgcgc | tccacctctg | ggagtgggag | gggaactgag | cttgaaatca | tgaagcccct | 1320 |
| tcccacaagg | aaaccaggag | ggagactgcg | agtgagtgcc | cgggaccacc | tcatcagaga | 1380 |
| tgcttactgc | agccctgcag | gtgcctgtgc | actgatggaa | tccacagtgt | agtcagaaaa | 1440 |
| gctgttgact | tctcttaaat | cagcttccct | gctgggcccc | tgaaagtgga | ctgggtgatt | 1500 |
| ctgtctggca | gagagtgggg | aaaagacgcg | gtttccagct | tgcagatttg | ttaagtttct | 1560 |
| caggcagatt | ttgactttca | gcctttcata | cttgtttaag | caactatttg | tattaaatga | 1620 |
| agttttttga | aaaaaaaaa | aaaaaaaa | | | | 1648 |
| _ | | | | | | |
| <210> 885 | | | | | | |
| <211> 1058 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 885 | | | | | | |
| ggcacgagtg | atgatgcacg | gaggaccccc | tacccaccct | ggaatgacta | tgtcagcaca | 60 |
| | atgttaaatt | | | | | 120 |
| | tataagggaa | | | | | 180 |
| _ | tttgaccaga | | | | | 240 |
| | tgtcattttt | | | | | 300 |
| | - | _ | = = | • | - | |

| cgagagttat tgatcacgcc tttccacact ccatccagga cactggagat tgtgtttca tttatagttc | aactactgta gttatgttgc atgtgtgttg gagactgtgg catgatgaac tgcccggcct gtgcttcata | gacaattctg gtataaatat ctcaaatagt ttcccaaaag tatatattt ttttggctga ttgttcctcc agccaattct | aggaactaag tttagaagag aatgactgtt aaacctgttg acctcatcac ataaatgtgt tattattatt | ttaaacttgt aaaaaaaaat ttggttcatc ggccaatgag tcgaactcca cctttagttt tttgggggac | acatttctgt atatccttgt agtgaattca aaaagaacca gcttcaagaa caaacagatc tcttcttcaa | 360 420 480 540 600 660 720 780 |
|--|---|---|--|--|--|---|
| tggttgtgga atggtcattg agcaagagaa | caaaacaatc aaccataact tactgtaaca | taaagacaga ttaagttggg aggactttat aacttcgtac caattgaaaa | cagctttcct cagaaactca agagttcggt | caacacaaaa aagcttgggg | aaagttatta gataaaaagg | 840 900 960 1020 1058 |
| <210> 886 <211> 1332 <212> DNA <213> Homo | sapiens | | | | | |
| ctccatgtgg ctgaggagga gcctttctct gagctcctga agatgctcaa gaagattatt aatagcagaa gtagacttactg ttagakaact tggtgacagt tgagtttggt ctaagccaac gtttggggta acaaatagaa cttattatgc catgaggcaa ttatgatgac gtgtggttgc atagtagaca tagaaactat gggagtttga aaaaactcg | aaatgctcta tataactctg ggctctgcat aggcaaggac gaaatatttg ctggcaacag ggtcttgggg catatggggg gagamgccmg ttcatgtgtt aactgggatc agaactcaga agtctcttag cctccctcag actaggcact gtggtggtgt ttgcccaaag agagcaccca ttccattaga gggcatggt gagcagcctg | ttcctgcagt cattttaaa tcctttgaat tgtcttatga tgtcttactc tatgattgaa tgtgtatcag gatggtgccc aggaggtaat caggaagtta tcatttttt agaaaggtt attgagttca atgctgtaaa agtcgtagtg gttctaagca tgccatcaca aacacagagt gtcttagctg atcagggaca agtccatgtc ggaaccatag | cttaatttcc acccctgtag aattctatct acattatctt ttaaagttga agaataaaga agtaagaaca aatggtctaa aattgtagca ttcctgtgt tgttccttgg aatcccagct atttaagttc aaagtcgaat cttgaactta atacgtgtga tcacactgaa ctgtgctgtt gactggaaat tgtgatccca | ttcattaatc aacatcatgc tacacctccc catcatggtg aagttgcagt gcctgaaatc ggaaagatca ggcgcgtgga cagttgggtt gagtgtgatt tacattttac atccactta ctcagtaatg aaggcagcag cttaaccttc agagaaagga ttggactcag tctgactcag tctgactcag tttcaacca tgggaagatc | tttctctaat ctctcttagg tttttggatt ccttgcacct caatctttt agaaagtaca gaagagtcag tcctcaaggc attgccattt ttgctcaaca agaatggttg tctctgggg aaatggggc tgattgagct atagcatctc ggcagagaga aacttgggca tatctgtcac ttaaaaatg gcttgaggt | 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 1080 1140 1200 1320 1332 |
| <210> 887 <211> 2010 <212> DNA <213> Homo | sapiens | | | | | |
| ttcttagagg cacctctgtc catgactggc gcagctgaga gaggtggcag aggctctcag gtgggggatt ccagctcttt | gcatggcacc tgttgctgac cctgccggca actggcgagg gttcaggttt aactcatggg tggggtgctg tccttaccct cctcagctgt | taaggtttct cccagtccct gttgggggc gctggggtgc ccccttcctc tcaagatggt tgtggagctg tgggcctggt ggctctgacg ccctttccct | gcccagataa ttacacaccc aggtaagggt caaggcccta gaggtctcgc gacctgtccc tatgcactgg tgggaaggct tgtcgcctgg | agtagcacag acctcatctc ctctctcata gctggccccc tgtctgctgg gggccagtgg cagatggacc tggagggccc | tggcaggcag cgtgcacagc gaggggagct gggtgaacct acagtacgtt acccctgtgt ttgctttggt gtctcatcac | 60 120 180 240 300 360 420 480 540 600 660 |

| | ccctcaacac | atastassa | accccaaaaa | aacccacctq | ttttggagct | 720 |
|--|--|--|--|--|--|--|
| agrage | cagcgtttcc | ttggggaagg | geeeeagagg | ctggacagca | ctgatccggg | 780 |
| cagettggee | cagegeeeee | ccggggaagg | actaccasa | atacacaaaa | atgtagtata | 840 |
| caggcagcgt | gtgcagcagt | ggccagccag | agracetttt | acgeacgggg | cacacttoto | 900 |
| tggctccggg | ccctcgacat | etergettty | ggggaccttt | gaggetgagg | accatattta | 960 |
| aggggagagg | ggacagcaag | grgggaggrt | gaayayeeee | gaggeteage | tatasagas | 1020 |
| tggcattcgg | tggacaccat | ggeerrggge | ggctggacag | aggataagga | aggattttag | 1080 |
| atgcatgggg | cacatggtaa | gerrggeaag | ggeteeagga | acgetgaega | agggcccag | 1140 |
| gaccccacc | cccatgcctg | taccagggct | ggeetecaga | gegggegagg | tatttaatta | 1200 |
| tgtgggcttt | tcattctgag | gtettggeee | ceetggeeae | cycaayyyac | ttantatta | 1260 |
| tcagggcttg | caaaaaccaa | ccttcgagaa | agaaaaggga | actetteacg | tttaattaat | 1320 |
| actttgtgtg | tatgcgtgtg | tgtgtgtgtg | tgcacgcgcg | egtgtgegtg | etagggggt | 1380 |
| ggaattttgt | tttgtgaaat | tcccctccaa | tegtgteaga | atttacctcc | argececage | 1440 |
| cacactgttg | gttctgcgct | ctgaacctgg | gtgtagctca | tttgaaggac | recettetge | 1500 |
| gtttcctaac | agttatttgg | tggtctcaag | agttgaggtt | gtggagggtt | gggagaaact | 1560 |
| gaagttctat | acatttccat | agagtttaca | tcctgcagtt | aaaaggcagg | gagggeteag | 1620 |
| cccgggcccc | acagctccag | gccatcccta | cgggctgccc | acagtgcccc | cttttctcta | 1680 |
| gccgaatctt | tttcgaacag | cccgggaaag | gaaaacggat | tcacttgctg | attttgttca | |
| cggcggaagc | accatgttcc | gttccttttt | caggttcagt | ttgttgtgta | aatggcggtt | 1740 |
| ttttctggtg | tgagctttgg | tgatggtggc | agggctcctt | tgaagagatg | gttccacctc | 1800 |
| gtggtctgaa | gaacaaacca | gagaagagtc | tggtttggcc | agaggccccc | tccggcccac | 1860 |
| gtcaccctga | gtacacccct | ctgattgctc | tgctgtcaag | aagcacgttt | ccaccagctg | 1920 |
| | tacaatgcat | | atatttgcat | ccaagacaat | aaagacacct | 1980 |
| tattttttt | gaaaaaaaaa | aaaaaaaaaa | | | | 2010 |
| | | | | | | |
| <210> 888 | | | | | | |
| <211> 2059 | | | | • | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 888 | | | | | | |
| | aagtcaatcc | taaggtttct | ctactctaac | taagaggatg | taaatttgga | 60 |
| ttcttagagg | gcatggcacc | cccagtccct | gcccagataa | agtagcacag | tggcaggcag | 120 |
| cacctctatc | tgttgctgac | attagagaga | ttacacaccc | acctcatctc | cgtgcacagc | 180 |
| catgactggc | cctgccggca | actagagatac | aggtaagggt | ctctctcata | gaggggagct | 240 |
| acaactaaaa | actggcgagg | ccccttcctc | caaggcccta | actaacccc | gggtgaacct | 300 |
| geageegaga | gttcaggttt | tcaagatggt | gaggtctcgc | tatctactaa | acagtacgtt | 360 |
| aggeggeag | aactcatggg | tatagaagta | arcctatece | gaaccaataa | acccctqtqt | 420 |
| atagagatt | tggggtgctg | tagacctagt | tatgcactgg | cagatggacc | ttactttaat | 480 |
| ccacctcttt | tccttaccct | aactetaaca | taggaagget | tagaagaccc | gtctcatcac | 540 |
| ccagctcccc | cctcagctgt | ccctttccct | tatcacctaa | ccactacctc | gcccgcctga | 600 |
| | caggcagcct | | | | | 660 |
| agtagasttt | Caggeagee | aaacacacac | | | 35-55- | |
| agragacece | ccctcaacac | ctactccca | accccagagg | aacccacctq | ttttggagct | 720 |
| | ccctcaacac | ctgctccccg | gccccagagg | aacccacctg | ttttggagct | 720 780 |
| cagettgged | ccctcaacac cagcgtttcc | ttggggaagg | gccccagagg gaaaggaggg | aacccacctg ctggacagca | ttttggagct ctgatccggg | |
| caggcagcgt | ccctcaacac cagcgtttcc gtgcagcagt | ttggggaagg ggccagccag | gccccagagg gaaaggaggg agtgccaaag | aacccacctg ctggacagca atgcacgggg | ttttggagct ctgatccggg atgtggtgtg | 780 840 |
| caggcagcgt tggctccggg | ccctcaacac cagcgtttcc gtgcagcagt ccctcgacat | ttggggaagg ggccagccag ctctgctttg | gccccagagg gaaaggaggg agtgccaaag ggggattttt | aacccacctg ctggacagca atgcacgggg accttgtctg | ttttggagct ctgatccggg atgtggtgtg cacacttgtc | 780 840 900 |
| caggcagcgt tggctccggg aggggagagg | ccctcaacac cagcgtttcc gtgcagcagt ccctcgacat ggacagcaag | ttggggaagg ggccagccag ctctgctttg gtgggaggtt | gccccagagg gaaaggaggg agtgccaaag ggggatttt gaagagcttt | aacccacctg ctggacagca atgcacgggg accttgtctg gaggctcagc | ttttggagct ctgatccggg atgtggtgtg cacacttgtc agcatgtttg | 780 840 900 960 |
| caggcagcgt tggctccggg aggggagagg tggcattcgg | ccctcaacac cagcgtttcc gtgcagcagt ccctcgacat ggacagcaag | ttggggaagg ggccagccag ctctgctttg gtgggaggtt ggccttgggc | gccccagagg gaaaggaggg agtgccaaag ggggattttt gaagagcttt ggctggacag | aacccacctg ctggacagca atgcacgggg accttgtctg gaggctcagc gtttttgtga | ttttggagct ctgatccggg atgtggtgtg cacacttgtc agcatgtttg tgtgaaggac | 780 840 900 960 1020 |
| caggcagcgt tggctccggg aggggagagg tggcattcgg atgcatgggg | ccctcaacac cagcgtttcc gtgcagcagt ccctcgacat ggacagcaag tggacaccat cacatggtaa | ttggggaagg ggccagccag ctctgctttg gtgggaggtt ggccttgggc gcttggcaag | gccccagagg gaaaggaggg agtgccaaag ggggattttt gaagagcttt ggctggacag ggctccagga | aacccacctg ctggacagca atgcacgggg accttgtctg gaggctcagc gtttttgtga acgctgacga | ttttggagct ctgatccggg atgtggtgtg cacacttgtc agcatgtttg tgtgaaggac agggttttag | 780 840 900 960 1020 1080 |
| caggcagcgt tggctccggg aggggagagg tggcattcgg atgcatgggg gacccccacc | ccctcaacac cagcgtttcc gtgcagcagt ccctcgacat ggacagcaag | ttggggaagg ggccagccag ctctgctttg gtgggaggtt ggccttgggc gcttggcaag taccagggct | gccccagagg gaaaggaggg agtgccaaag ggggattttt gaagagcttt ggctggacag ggctccagga ggcctccaga | aacccacctg ctggacagca atgcacgggg accttgtctg gaggctcagc gtttttgtga acgctgacga gcgggtgagg | ttttggagct ctgatccggg atgtggtgtg cacacttgtc agcatgtttg tgtgaaggac agggttttag acagagcagc | 780 840 900 960 1020 |

tcagggcttg caaaaaccaa ccttcgagaa agaaaaggga actcttcacg ttgaatgttg actttgtgtg tatgcgtgtg tgtgtgtgtg tgcacgcgcg cgtgtgcgtg tttacttcat

ggaattttgt tttgtgaaat tcccctccaa tcgtgtcaga atttacctcc atgccccagt cacactgttg gttctgcgct ctgaacctgg gtgtagctca tttgaaggac tctcttctgc

gtttcctaac agttatttgg tggtctcaag agttgaggtt gtggagggtt gggagaaact

gaagttctat acatttccat agagtttaca tcctgcagtt aaaaggcagg gagggctcag

cccgggcccc acagctccag gccatcccct acgggctgcc cacagtgccc ccttttctct

agccgaatct ttttcgaaca gcccgggaaa ggaaaacgga ttcacttgct gattttgttc

acggcggaag caccatgttc cgttcctttt tcaggttcag tttgttgtgt aaatggcggt

tttttctggt gtgagctttg gtgatggtgg cagggctcct ttgaagagat ggttccacct cgtggtctga agaacaaacc agagaagagt ctggtttggc cagaggcccc ctccggycca

1260

1320 1380

1440

1500

1560

1620

1680

1740 1800

1860

```
1920
cqtcaccctg agtacacccc tctgattgct ctgctgtcaa gaagcacgtt tccaccagct
                                                                   1980
gtattcaaca ctacaatgca ttttttaaac tatatttgca tccaagacaa taaagacacc
2040
                                                                   2059
aaaaaaaaa aaaaaaaaa
<210> 889
<211> 1284
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (47)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (277)
<223> n equals a,t,g, or c
<400> 889
                                                                     60
ggagccccac cgcggtggcg gccgctctag aactagtgga tcccttnggg ctgcaggawt
                                                                    120
tcggcacgag gcgccagatc ccggttggag agccggggtg caggcgctga gccgggattg
                                                                    180
gagtgtggtt ggagttgggg agccaagggt gtgtgccggt ggccgggggtt ggggtctccg
                                                                    240
ccqcqccctc cggccggctc ccgctcactg cgctggctcc tccgcaggat gcagggtgcc
                                                                    300
gggaaagcgc tgcatgagtt gctgctgtcg gcgcagngtc agggctgcct cactgccggc
                                                                    360
gtctacgagt cagccaaagt cttgaacgtg taagtgtaga cgcggcccag gctgggagac
                                                                    420
agggggggg gtgaatggcg aggagactgg cggatgggag gggtggcggc gggagaactc
                                                                    480
ggctagccgg ttctgaccta ggtccccgcc ttgccctcgc agggaccccg acaatgtgac
                                                                    540
cttctgtgtg ctggctgcgg gtgaggagga cgagggcgac atcgcgctgc agatccattt
                                                                    600
tacgctgatc caggctttct gctgcgagaa cgacatcgac atagtgcgcg tgggcgatgt
gcagcggctg gcggctatcg tgggcgccgg cgaggaggcg ggtgcgccgg gcgacctgca
                                                                    660
                                                                    720
ctgcatcctc atttcgaacc ccaacgagga cgcctggaag gatcccgcct tggagaagct
                                                                    780
cagcctgttt tgcgaggaga gccgcagcgt taacgactgg gtgcccagca tcaccctccc
                                                                    840
cgagtgacag cccggcgggg accttggtct gatcgacgtg gtgacgcccc ggggcgccta
                                                                    900
gagcgcggct ggctctgtgg aggggccctc cgagggtgcc cgagtgcggc gtggagactg
gcaggcgggg ggggcgcctg gagagcgagg aggcgcggcc tcccgaggag gggcccggtg
                                                                    960
gcggcagggc caggctggtc cgagctgagg actctgcaag tgtctggagc ggctgctcgc
                                                                   1020
ccaggaaggc ctaggctagg acgttggcct cagggccagg aaggacagac tggccgggca
                                                                   1080
ggcgtgactc agcagcctgc gctcggcagg aaggagcggc gccctggact tggtacagtt
                                                                   1140
gcaggagcgt gaaggactta gccgactgcg ctgctttttc aaaacggatc cgggcaatgc
                                                                   1200
ttcgttttct aaaggatgct gctgttgaag ctttgaattt tacaataaac tttttgaaac
                                                                   1260
                                                                   1284
aaaaaaaaaa aaaaaaaact cgag
<210> 890
<211> 1288
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1283)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1285)
<223> n equals a,t,g, or c
<220>
<221> SITE
```

```
<222> (1287)
<223> n equals a,t,g, or c
<400> 890
                                                                       60
gcctccgccc cctcaacctt cgcggggcgc gggccgcagc ttttcggttc acagcgggca
gggaaagccg cgggaagggt actccaggcg agaggcggac gcgagtcgtc gtggcaggaa
                                                                      120
aagtgactag ctccccttcg ttgtcagcca gggacgagaa cacagccacg ctcccacccg
                                                                      180
gctgccaacg atccctcggc ggcgatgtcg gccgccggtg cccgaggcct gcgggccacc
                                                                      240
                                                                      300
taccaccggc tcctcgataa agtggagctg atgctgcccg agaaattgag gccgttgtac
                                                                      360
aaccatccag caggtcccag aacagtttty ttctgggctc caattatgaa atgggggttg
                                                                      420
gtgtgtgctg gattggctga tatggccaga cctgcagaaa aacttagcac agctcaatct
gctgttttga tggctacagg gtttatttgg tcaagatact cacttgtaat tattccaaaa
                                                                      480
                                                                      540
aattggagtc tgtttgctgt taatttcttt gtgggggcag caggagcctc tcagcttttt
                                                                      600
cgtatttgga gatataacca agaactaaaa gctaaagcac acaaataaaa gagttcctga
tcacctgaac aatctagatg tggacaaaac cattgggacc tagtttatta tttggttatt
                                                                      660
                                                                      720
gataaagcaa agctaactgt gtgtttagaa ggcactgtaa ctggtagcta gttcttgatt
                                                                      780
caatagaaaa atgcagcaaa cttttaataa cagtctctct acatgactta aggaacttat
                                                                      840
ctatggatat tagtaacatt tttctaccat ttgtccgtaa taaaccatac ttgctcgtat
                                                                      900
ataccccctg cctccttctg ttccagtcag ccaacatatg tacataaaag aacacaaaa
                                                                      960
ttcaagaagt tggaagatta aattatctgc ttatttagtg taggatggtc aggtagctag
                                                                     1020
ctataagtga aaggaaattt tgctgaagag actgagaaat gggtagtgga atgactatca
                                                                     1080
agatgacete aaactattta aaaacatttt aacttgeeat gaagaatett gatgattttt
                                                                     1140
gtataaatgt tgtataaaat tcttttacag ctacagattt ttaaatagga tcattgtaar
                                                                     1200
gattaatgag ataatgtttt aacatagtgc ctgggtccat gataagtgtt aaatttttca
                                                                     1260
attaccetca gtaactgata atgtagcaag aaaatactet atatteagae agacetgaat
                                                                     1288
ttgatcccag ctctatacta ccntngna
<210> 891
<211> 1980
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1356)
<223> n equals a,t,g, or c
<400> 891
gggccagcag cagaacttcc actcggtgcg ggagatgttc gagtcacaga ggatcggctt
                                                                       60
                                                                      120
gaacaactct ccagtgaacg ggaatagtag ctgtcaaatg gccttccctt ccagccagtc
tctgtaccgc acgtccggag ctttcgtcta cgactgtagc aagttttgac acaccctmaa
                                                                      180
agccgaacta aatcgaaccc caaagcagga aaagctaaag gaacccatca aggcaaaatc
                                                                      240
gaaactaaaa aaaaaaaatc caattaaaaa aaacccctga gaatattcac cacaccagcg
                                                                      300
aacagaatat ccctccaaaa attcagctca ccagcaccag cacgaagaaa actctatttt
                                                                      360
cttaaccgat taattcagag ccacctccac tttgccttgt ctaaataaac aaacccgtaa
                                                                      420
actgttttat acagagacag caaaatcttg gtttattaaa ggacagtgtt actccagata
                                                                      480
acacgtaagt ttcttcttgc ttttcagaga cctgctttcc cctcctcccg tctcccctct
                                                                      540
cttgccttct tccttgcctc tcacctgtaa gatattattt tatcctatgt tgaagggagg
                                                                      600
gggaaagtcc ccgtttatga aagtcgcttt ctttttattc atggacttgt tttaaaatgt
                                                                      660
aaattgcaac atagtaattt atttttaatt tgtagttgga tgtcgtggac caaacgccag
                                                                      720
aaagtgttcc caaaacctga cgttaaattg cctgaaactt taaattgtgc tttttttctc
                                                                      780
attataaaaa gggaaactgt attaatctta ttctatcctc ttttctttct ttttgttgaa
                                                                      840
catattcatt gtttgtttat taataaatta ccattcagtt tgaatgagac ctatatgtct
                                                                      900
                                                                      960
ggatacttta atagagcttt aattattacg aaaaaagatt tcagagataa aacactagaa
gttacctatt ctccacctaa atctctgaaa aatggagaaa ccctctgact agtccatgtc
                                                                     1020
                                                                     1080
aaattttact aaaagtcttt ttgtttagat ttattttcct gcagcatctt ctgcaaaatg
tactatatag tcagcttgct ttgaggctag taaaaagata tttttctaaa cagattggag
                                                                     1140
                                                                     1200
ttggcatata aacaaatacg ttttctcact aatgacagtc catgattcgg aaattttaag
                                                                     1260
cccatgaatc agccgcggtc ttaccacggt gatgcctgtg tgccgagaga tgggactgtg
                                                                     1320
cggccagata tgcacagata aatatttggc ttgtgtattc catataaaat tgcagtgcat
attatacatc cctgtgagcc agatgctgaa tagatntttt cctattattt cagtccttta
                                                                     1380
```

```
taaaaggaaa aataaaccag tttttaaatg tatgtatata attctccccc atttacaatc
cttcatgtat tacatagaag gattgctttt ttaaaaaatat actgcgggtt ggaaagggat
                                                                   1500
atttaatott tgagaaacta ttttagaaaa tatgtttgta gaacaattat ttttgaaaaa
                                                                   1560
gatttaaagc aataacaaga aggaaggcga gaggagcaga acattttggt ctagggtggt
                                                                   1620
ttctttttaa accatttttt cttgttaatt tacagttaaa cctaggggac aatccggatt
                                                                   1680
ggccctcccc cttttgtaaa taacccagga aatgtaataa attcattatc ttagggtgat
                                                                   1740
                                                                   1800
ctgccctgcc aatcagactt tggggagatg gcgatttgat tacagacgtt cggggggggtg
gggggcttgc agtttgtttt ggagataata cagtttcctg ctatctgccg ctcctatcta
                                                                   1860
gaggcaacac ttaagcagta attgctgttg cttgttgtca aaatttgatc attgttaaag
                                                                   1920
                                                                   1980
<210> 892
<211> 2501
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (521)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (548)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (550)
<223> n equals a,t,g, or c
<400> 892
tcactaagcc tcccagctcg gtagacatgg aagaaaaggt gtccttcctg cattatagaa
                                                                      60
aaagcacaga tatgccagat gtgtgcttca ggcctggttc ttgatgtgtt aattgaggct
                                                                     120
aacaggtttt agatgattcg tttcatttct aacagaacca gttgttcaaa actattgtct
                                                                     180
tgtttccagt gccaaagctg tggatattca atgatgttta tcactctccc cctgccgctg
                                                                     240
cagtcctacc ctgcactgct aatcctccct cagcaaacag atgcccctgg gaacaatgta
                                                                     300
ggggtgagca caaagaaatt caggagaaga aagtacattc atgtaattca aaattgttat
                                                                     360
ctctatcata agatagtaaa aagcctttgt tcagattttt tattgtgagc agtgttgtat
                                                                     420
tttttgttaa tgtttcaagg ggataggttg atattttgat atcacttaga accgagtcgg
                                                                     480
taaactacat atttatcttt gatcaactaa gattctgttt ntaaagaaaa gaggacatct
                                                                     540
ttggctantn atgattacgt aacagtgaat ggcaggtgcc atatggatcc ttggagcaca
                                                                     600
gacggacatc aaccagcaag tatttctcag attctaccct aaaatatgac agtatgtcag
                                                                     660
gtgtggacta atatatgtaa tagctttcaa aaggaactga acaactagca agtaaagagt
                                                                     720
aatttatatt aaaagatccc aataatagat ggactatggc aagaacctct gaactagtct
                                                                     780
ctctgcttct tctctacctc tttacagtgt attatctaca ctgcaatcaa aatcttcctt
                                                                     840
ccaaatgtta agtaactgtt caatggcttc ccatgggact cggaataaaa gctcacactc
                                                                     900
tttacaatgg ccctgcaggt tcctcatctc ctacctccag catcttcact gtccctctgc
                                                                     960
                                                                    1020
tccaaccaca ctgcctcttt cttattcctc cagacctccc aacacagccc tgcccccaag
accettecaa tgactetgat cetettecet gegetaceca gtgteteact ceategatte
                                                                    1080
ctccacatcc tgccaaatgt cacctaacca gaaaggcttt gttgaaccac cccagataaa
                                                                    1140
                                                                    1200
ataaagtccc ctgcctttac ccatcactct ctcttgcccg gtttaattct ttctagcact
tacattgtga taatttcttt tctgcctcct gcctcttttc attggaaaat atattacatg
                                                                    1260
agaggaggtt tgctttattc attgctgaat gttcagcacc tagaataata cctggcacaa
                                                                    1320
aataggteet caattattat acceaattee teecagttet ettggaagtt tetecatttt
                                                                    1380
accattgaaa attccacatc cttgtgattc actttgtccc agtgaattcc aaacagttgg
                                                                    1440
ccatcctacc cttaatagat agttgttgaa tgaaggaaag gaatgaagaa aaaagaatga
                                                                    1500
ggacagggaa ggagggagga atctaggaca gaaaagaagg gagagaggaa aaaaaggatg
                                                                    1560
ttaatatttt cttgttctat atgtagaaag caaaagagta tttttgtaat ctttttcag
                                                                    1620
caaatgcctg gatcaaattc aatatgattt taaagccatg agaccttctc attcttggtt
                                                                    1680
ttgatgttgc acggtatcat aatacatctg attggaattt caatatcagg tttaatatac
                                                                    1740
```

```
tatgcaagct ggtataggct ctgaaattat gcatattcat gagagcaatc acacccttac
                                                                 1800
ttttgatata actggcaaag taaggtacca caagagaaca ataatcaaag aaaaagggag
                                                                 1860
                                                                 1920
gactaccagt tgttatttac ttatgacatt ttactggaaa aacttaagca acatgaaaga
ctatttctaa atgaagtact aaaactaaca agacaatgtt ataaagtgtc atattttctt
                                                                 1980
tccttttata caataaaaca ttgaaaagct ccaccactat gcagccactt caccagatgc
                                                                 2040
aataatatcc aaatgtgaaa gtaattaata atattgtagt tttaattccc ttggtatttc
                                                                 2100
                                                                 2160
agagatatcc tttgaacagc ctaaatcaaa tcatactggt acttatgaga aatagatatc
                                                                 2220
tcttgtgagt ccttatattg tgcttcccaa gaacctacag tgcatttcag ttatttacct
tgaaaattct tcagcccatc cagagtgggt ttggaaattt gtaatcattt tgtagaatgt
                                                                 2280
                                                                 2340
gataagggag gacctgtctt cctaaattct caagcttgga attttcaagt cagtgtcagg
                                                                 2400
accataggct ctctaatgca tatatatttg ccctgagcaa ataattattt atctctgtgc
                                                                 2460
ttcggtagtt gcatctgtat gttaaaaata agattattgc tatgttgatt tcttatgaca
                                                                 2501
<210> 893
<211> 672
<212> DNA
<213> Homo sapiens
<400> 893
                                                                   60
ggcacgaggc tctgccttcc ctggtcccca ctgcccatat ctgtggactg ccccttccaa
agacccctgg ggggggtggg gcattccgcc cacccctttc ccccatcact tctcgcctgt
                                                                  120
                                                                  180
cagtgattcc atgtttcgta acgggggatt ctctgccttt ttgtatcaaa gaacaagcaa
                                                                  240
atggaccccc gcccgctgca ggcgcccata gccatcgggt ctctaaagct gagtggctag
                                                                  300
cagcgtttgt ttgtttgttt ttttttttt ttctgaaggt gggacagtca cttcctcctc
cctccccacc cctgtcgcat ccacgtgcga cctggaggac tggtcagaac cgttactgtg
                                                                  360
aatgagtgaa gatcctggag gaccctgggc cccaggccag ctcccatcgc tgggggacgg
                                                                  420
480
aaaagttttt ttaaagtggg ggaaaaacat ccaagcactt taattccaat gtaccaggtg
                                                                  540
aactgacgga gctcagaagt tttcctttac accaactgtc aatgccggaa ttttgtattc
                                                                  600
                                                                  660
672
aaaaaaaaa aa
<210> 894
<211> 1947
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1947)
<223> n equals a,t,g, or c
<400> 894
gaatteggea egaggetaae tgaaaggtea aaaattaeat eeateagtea tggttatgtg
                                                                    60
                                                                   1.20
caagtccttg tagaagcttt tattaaagtc atgctaaatc acaagaattg acatttgtac
                                                                   180
caatatctga aacttcttca tgttttttca ataacataca gcttctgcct gtgtagatat
                                                                   240
tatgccatca gttggttctc aaaagtattt taagtgcttc agatgtgtgt tcccattata
ttttgaaaac atgaaaaatg ctttaatgca tgtatgtacc agcagtggtt acttgcatgt
                                                                   300
gtagtgtttt tcaagaggtc tgggtcttaa caaaatgttt tcctttatct cagtgctctt
                                                                   360
ctgcctcttt ttgttggtgt ccttgagaac aatacacctt ctattccttc attggttaca
                                                                   420
                                                                   480
cctttcctgt gacatttagc gagtttcaaa cttacttcca tatgaggcta agaaacctca
aawttcagga attgggaaaa ataaaattag cacttgcaga agtagcagca gatgggaaaa
                                                                   540
 tgccttgatt gacattttct ttcagcattt aaaatttttg gcattttaca gcttcatgac
                                                                   600
 aaacagtttt gtgcccatac cttagaaaat gtggtgctga gttaaataaa ggctgtttga
                                                                   660
 gcactggagc agaaaaatgc attatttgca aactggtgga taattttgtg ccttctcttc
                                                                   720
 tggccaccaa gccagtgtag aaacagcaaa aatgtcataa aaattcttat atttaaaaca
                                                                   780
                                                                   840
 aaaacaaaag caaaaacaaa cattgaatta aattaagttt tgtaatttta aactttaaaa
                                                                   900
 acttctactg aaaatatttc cgccaaatgc catcaatatt ttagactgta cctcgtttgc
 aaaactgctt tgagagggaa gagtggacaa ctcccatcag ccttattctc ttgagaacta
                                                                   960
 tattttggtt cctagtaaca gcctttccaa agctctactc ttggttttta ttactcataa
                                                                  1020
```

```
atgtttaaat tagaaaagaa gggaccttgt acatgtgaaa cctaattgac, tctctatatt
ttggacaatt tatgtatctg aaatgtgttg tctctgttat atgatgttat ttttgccagg
                                                                    1140
agactacagg ttgatttagc ttgatagctg aaatttgatg gaaaactgat ttccatttag
                                                                    1200
tcttaccaag tgttgcttct ctcttactag acagatatcc acttagtaaa atctaaagca
                                                                    1260
gtatgtaaat gaaaccagca aagagagtag ggtttatttt ataaacattc ttaatgctaa
                                                                    1320
gtaaccagtt gttcaattta ttatatgtgt ctgaggacat taaaacacca taagrttgta
                                                                    1380
ataattggtt gtgccaatgt gtgagggatt tacctttagg ctctctgtca ccagtgattt
                                                                    1440
actagtgtta gctgtttaac acattatctg tatttagtag tgattattta tttacaagtt
                                                                    1500
ggtggtaatt cagcagtcag gactctaagc ttttatagtt gaattgagga aatytcgctt
                                                                    1560
ttattcattt agctggcaac tgcctttatt gcagacctct ggtgcttggc tttcaaggaa
                                                                    1620
gcctatgaga tgccaaaatc acacctttag agagcacctt gctctaatag gtgatgcatg
                                                                    1680
agcaaacagt gagatttgaa ggggttttaa cataatttag aatgtgaaaa aaatatcaat
                                                                    1740
1800
taccactttg tcttttaggt ctttaagtaa ctgaagttaa gcacagaaaa aaaaatcact
                                                                    1860
tcatggaaat ttcagtaaga aacccaaact tctaaaaatt gcttgcagat gagctaaaaa
                                                                    1920
                                                                    1947
aaaaaaaaa aaaaaaactc gggggtn
<210> 895
<211> 2311
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (2301)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2311)
<223> n equals a,t,g, or c
<400> 895
catacgcaag tcacatgacc atttaaatgt gcaaatgtaa gaagattcaa tgtgtttaca
                                                                      60
tcaaatgaca tattttattg atttattgca gattcagtgc atatgagcca aattgttgag
                                                                     120
tgtgtaagag ctatattgtg tattttatta aattaatata tagttgtgtt gcaaaaatat
                                                                     180
ttgggcttat attgtaaatg gcaagtgttg ccttggtagc tgtcgaactc tatgagtttt
                                                                     240
gttttttcct gcttcctttt ccccatggag tgtgggaagc agtgcctcag agcaaagtct
                                                                     300
cttgtttaat gtatagtcta ccaagtacta cagtacataa tctgttcaaa atgtgtttga
                                                                     360
gtgagctgat ggagctaact gaaaggtcaa aaattacatc catcagtcat ggttatgtgc
                                                                      420
aagtccttgt agaagctttt attaaagtca tgctaaatca caagaattga catttgtacc
                                                                      480
 aatatctgaa acttcttcat gttttttcaa taacatacag cttctgcctg tgtagatatt
                                                                      540
                                                                      600
 atgccatcag ttggttctca aaagtatttt aagtgcttca gatgtgtgtt cccattatat
 tttgaaaaca tgaaaaatgc tttaatgcat gtatgtacca gcagtggtta cttgcattgt
                                                                      660
 gtagtgtttt tcaagaggtc tgggtcttaa caaaatgttt tcctttatct cagtgctctt
                                                                      720
 ctgcctcttt ttgttggtgt cctttgagaa caatacacct tctattcctt catttggtta
                                                                      780
 cacctttcct tgtgacattt agcgagtttc aaacttactt ccatatgagg ctaagaaacc
                                                                      840
                                                                      900
 tcaaatttca ggaattggga aaaataaaat tagcacttgc agaagtagca gcagatggga
 aaatgccttg attgacattt tctttcagca tttaaaattt ttggcatttt acagcttcat
                                                                      960
 gacaaacagt tttgtgccca taccttagaa aatgtggtgc tgagttaaat aaaggctgtt
                                                                     1020
 tgagcactgg agcagaaaaa tgcattattt gcaaactggt ggataatttt gtgccttctc
                                                                     1080
 ttctggccac caagccagtg tagaaacagc aaaaatgtca taaaaattct tatatttaaa
                                                                     1140
 acaaaaacaa aagcaaaaac aaacattgaa ttaaattaag ttttgtaatt ttaaacttta
                                                                     1200
 aaaacttcta ctgaaaatat ttccgccaaa tgccatcaat attttagact gtacctcgtt
                                                                     1260
 tgcaaaactg ctttgagagg gaagagtgga caactcccat cagccttatt ctcttgagaa
                                                                     1320
 ctatattttg gttcctagta acagcctttc caaagctcta ctcttggttt ttattactca
                                                                     1380
 taaatgttta aattagaaaa gaagggacct tgtacatgtg aaacctaatt gactctctat
                                                                     1440
 attttggaca atttatgtat ctgaaatgtg ttgtctctgt tatatgatgt tatttttgcc
                                                                     1500
 aggagactac aggttgattt agcttgatag ctgaaatttg atggaaaact gatttccatt
                                                                     1560
 tagtcttacc aagtgttgct tctctcttac tagacagata tccacttagt aaaatctaaa
                                                                     1620
 gcagtatgta aatgaaacca gcaaagagag tagggtttat tttataaaca ttcttaatgc
                                                                     1680
```

```
1740
taagtaacca gttgttcaat ttattatatg tgtctgagga cattaaaaca ccataagatt
                                                                     1800
gtaataattg gttgtgccaa tgtgtgaggg atttaccttt aggctctctg tcaccagtga
                                                                     1860
tttactagtg ttagctgttt aacacattat ctgtatttag tagtgattat ttatttacaa
                                                                     1920
gttggtggta attcagcagt caggactcta agcttttata gttgaattga ggaaatctcg
cttttattca tttagctggc aactgccttt attgcagacc tctggtgctt ggctttcaag
                                                                     1980
gaagcctatg agatgccaaa atcacacctt tagagagcac cttgctctaa taggtgatgc
                                                                     2040
atgagcaaac agtgagattt gaaggggttt taacataatt tagaatgtga aaaaaatatc
                                                                     2100
aattcatatc tttcaagtac taacccctca aaaaagccca cacatacaaa atatgtgatg
                                                                     2160
tgataccact ttgtctttta ggtctttaag taactgaagt taagcacaga aaaaaaaatc
                                                                     2220
acttcatgga aatttcagta agaaacccaa acttctaaaa attgcttgca gatgagctaa
                                                                     2280
aaaaaaaaa aaaaaaaaa nctcgggggt n
                                                                     2311
<210> 896
<211> 2311
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (2301)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2311)
<223> n equals a,t,g, or c
<400> 896
                                                                       60
catacgcaag tcacatgacc atttaaatgt gcaaatgtaa gaagattcaa tgtgtttaca
                                                                      120
tcaaatgaca tattttattg atttattgca gattcagtgc atatgagcca aattgttgag
                                                                      180
tgtgtaagag ctatattgtg tattttatta aattaatata tagttgtgtt gcaaaaatat
                                                                      240
ttqqqcttat attqtaaatg gcaagtgttg ccttggtagc tgtcgaactc tatgagtttt
                                                                      300
qttttttcct gcttcctttt ccccatggag tgtgggaagc agtgcctcag agcaaagtct
                                                                      360
cttgtttaat gtatagtcta ccaagtacta cagtacataa tctgttcaaa atgtgtttga
                                                                      420
gtgagctgat ggagctaact gaaaggtcaa aaattacatc catcagtcat ggttatgtgc
                                                                      480
aagtccttgt agaagctttt attaaagtca tgctaaatca caagaattga catttgtacc
aatatctgaa acttcttcat gttttttcaa taacatacag cttctgcctg tgtagatatt
                                                                      540
atgccatcag ttggttctca aaagtatttt aagtgcttca gatgtgtgtt cccattatat
                                                                      600
tttgaaaaca tgaaaaatgc tttaatgcat gtatgtacca gcagtggtta cttgcattgt
                                                                      660
gtagtgtttt tcaagaggtc tgggtcttaa caaaatgttt tcctttatct cagtgctctt
                                                                      720
ctgcctcttt ttgttggtgt cctttgagaa caatacacct tctattcctt catttggtta
                                                                      780
cacctttcct tgtgacattt agcgagtttc aaacttactt ccatatgagg ctaagaaacc
                                                                      840
tcaaatttca ggaattggga aaaataaaat tagcacttgc agaagtagca gcagatggga
                                                                      900
aaatgccttg attgacattt tctttcagca tttaaaaattt ttggcatttt acagcttcat
                                                                      960
gacaaacagt tttgtgccca taccttagaa aatgtggtgc tgagttaaat aaaggctgtt
                                                                     1020
tgagcactgg agcagaaaaa tgcattattt gcaaactggt ggataatttt gtgccttctc
                                                                     1080
ttctggccac caagccagtg tagaaacagc aaaaatgtca taaaaattct tatatttaaa
                                                                     1140
acaaaaacaa aagcaaaaac aaacattgaa ttaaattaag ttttgtaatt ttaaacttta
                                                                     1200
aaaacttcta ctgaaaatat ttccgccaaa tgccatcaat attttagact gtacctcgtt
                                                                     1260
tgcaaaactg ctttgagagg gaagagtgga caactcccat cagccttatt ctcttgagaa
                                                                     1320
ctatattttg gttcctagta acagcctttc caaagctcta ctcttggttt ttattactca
                                                                     1380
                                                                     1440
taaatgttta aattagaaaa gaagggacct tgtacatgtg aaacctaatt gactctctat
attttggaca atttatgtat ctgaaatgtg ttgtctctgt tatatgatgt tatttttgcc
                                                                     1500
aggagactac aggttgattt agcttgatag ctgaaatttg atggaaaact gatttccatt
                                                                     1560
tagtcttacc aagtgttgct tctctcttac tagacagata tccacttagt aaaatctaaa
                                                                     1620
gcagtatgta aatgaaacca gcaaagagag tagggtttat tttataaaca ttcttaatgc
                                                                     1680
taagtaacca gttgttcaat ttattatatg tgtctgagga cattaaaaca ccataagatt
                                                                     1740
gtaataattg gttgtgccaa tgtgtgaggg atttaccttt aggctctctg tcaccagtga
                                                                     1800
tttactagtg ttagctgttt aacacattat ctgtatttag tagtgattat ttatttacaa
                                                                     1860
                                                                     1920
gttggtggta attcagcagt caggactcta agcttttata gttgaattga ggaaatctcg
cttttattca tttagctggc aactgccttt attgcagacc tctggtgctt ggctttcaag
                                                                     1980
```

| atgagcaaac aattcatatc tgataccact acttcatgga | agatgccaaa agtgagattt tttcaagtac ttgtctttta aatttcagta aaaaaaaaaa | gaaggggttt taacccctca ggtctttaag agaaacccaa | taacataatt aaaaagccca taactgaagt acttctaaaa | tagaatgtga cacatacaaa taagcacaga | aaaaaatatc atatgtgatg aaaaaaaatc | 2040 2100 2160 2220 2280 2311 |
|--|---|--|--|--|--|--|
| <210> 897 <211> 779 <212> DNA <213> Homo | sapiens | | | | | |
| ggtacctttc aactgaatgg gtttctatct ggtgtagata aggagaatga gcaaggaatt ttagaaaggg atattaaagg ttgtactttc ttgtagtgaa | agaataatgc ctctatggca ctcactggca gtccatgtgt aggaaaaggg gaggaatgag ttacagttga gaatctgatt aggtatgcca tcagagacta atgtgtccta gacacctgat | ttattttctt tgtcttttat atacaagtca acatttttaa ttaaagtggt cttctctgaa taaatgtgtg ttaatgaaat tggcagaata catctgaaat aatatgagag | gcatttctca gtgttcagtt atgccccatt ttacttaata tatgcatttt cctagcttta attccttgta ccactgtcct tctggatctt tgcatgggac caattggcca | taaagggaag gccattccta tttgtttttc accggaaatg tctatagatg ccacagtgat tttgctccta gagtattatc ccttggattt tcatgcccag gccaatagcc | gatgcatccc gctttggaaa ttttaaccga cagatgtgta agccattaca taaatcctat tcacaaagat tttcctcctg tgtacacata caatctggtt ataagcccag | 60 120 180 240 300 360 420 480 540 600 660 720 779 |
| <210> 898 <211> 715 <212> DNA <213> Homo | | | | | | |
| gacgagttco gccaagtatg ctcttcagag gggcgggago cctgagaatg gacctcatco agactctgca ctggcctcag tgctccaggo | ttaaaagaac ccttaaaacat | ggggcagctt ggctgacctc ttttcatcgt gatcattgtt gcagtcctgg gggcctgagc ctggcctctg tgtcctcagc | tttgaatgtg ctagaccgct gggaactacg gacaattccc ttcgatgaca cgggaggacg cctgcctccc tccctgggag gcctacctgt | tgctctttac ggggtgtgtt tgaaggacct ctgcctcata tgacggacac acgtgtacag gcctgtgcac ctgaaagtga tttgttttt | tgccagcttg ccgggcccgg gagtcgcctt catcttccat ggagctgctg catgctgcac tctggaacct ggatactccg taagaacaga attttactgg | 60 120 180 240 300 360 420 480 540 600 660 715 |
| <212> DNA <213> Home <400> 899 ccacgcgtcctgctcacacgctgctgctcacacgttgagggc | sapiens c gctccaggco g cagactctco g ccttttggco t catgcctctt | c acacccaget a gettgtacag c geaacetged c tetegtgged | cttccctgtc gctcagctcc ccaagtgtcag ctcaacaggcc | : tgcggcctct : tccctcacgg g ctcctgtctc : catcccctgc | gcccagcctc ccagtccaaa tggcctcttt cacctggcct | 60 120 180 240 300 360 |
| tggcctcct ccagtggcc | g gggcaatgct t ctgtagacca | cctccctctc a agcccgtgcc | gggagcctct tcagggcago | gegggeeeag cttteeagge | ttcctcaccg ctcctgcctc ctagcgtttg ggcccagctc | 420 480 540 |

| ttcctctcga | cggcctctgc | agggccagac | tgtcgtcaag | tcggcctgtc | cagggccagc | 600 |
|-------------|------------|------------|-------------|------------|------------|------|
| tectacetee | cggcggcctc | tgcaggccca | agtcgttctc | aagtcggctt | ccccaggccc | 660 |
| adctccddcc | tcttggcggc | ctctccaaat | gcaaaagttc | ctcgagtcag | cctctccagg | 720 |
| cccacctcct | cctgcctccc | agtggcctct | ttcggcccag | cccagctcat | gcctcccggc | 780 |
| ggggttggg | ggcccgctt | ttgactttcg | ataacctcta | caggeetega | caaggcccgg | 840 |
| ggccccca | ccagaaggcc | tacacaaacc | cagcetetge | ctcacagcgg | actctccacq | 900 |
| | tctcgcctca | ctacaaactc | ccaaatccaa | agetectace | teteggeege | 960 |
| eccagetage | ccagctcccg | cataggacta | acctattaaa | accetagaa | ctcattcctc | 1020 |
| ttcggcaggc | ecageteeeg | cetyceageg | ttaaaaaaaa | statacaga | ccacaacctc | 1080 |
| acaacagcct | ttccaggccc | agtttttccc | ccccggcggc | atastataa | agaggaagte | 1140 |
| ctcaagtcgg | cctctccaga | cccacttgca | geeteeegge | acceletee | ttagagtaa | 1200 |
| ttcctcccgg | ctgcgtctcc | aggcccgact | ttggcctccc | aacaacgtct | Liggacicag | 1260 |
| ctcctgccca | gctcccagcg | gccctggtag | gcccacagct | tcccgaagcc | aageteeea | |
| ggcccagctc | aggcctcacg | gtggcctctc | caggccagct | cctgccctct | gatggcatct | 1320 |
| gcaggcccca | aacggcctcc | ggttggtggg | ctcctctagg | cccagcttgg | gcctcctggc | 1380 |
| ggcctctgca | ggcccaaatc | gtcctgaagt | cggcctctcc | aggcccagct | ccggcctccc | 1440 |
| ggcggcctct | gcaggcccaa | gtcatcctca | agtcagcctg | gaattgggcc | tggaagagag | 1500 |
| caagtcggcc | tccccgggcc | cagctccggc | ctcttggcgg | cctctccggg | tgcaaaagtt | 1560 |
| cctcgagtca | gcctctccag | gcccagctcc | tcctgcctcc | cagtggcttc | tttcagccca | 1620 |
| gcccagctca | tggctctcag | cggccttccc | aggtcccgct | tttgactttt | ggcggcctct | 1680 |
| tcaggcccag | aacttgacct | ccagtcggcc | tttgcaggcc | cggcctcctg | cctctcaaag | 1740 |
| acctacacaa | gcccggcctc | ggcctcggcc | tcacagcgga | ctctccacgc | ccagctagct | 1800 |
| ctcgcctcac | tgtggcctcc | ccaqtccaaa | gctcctgcct | ttcggccact | tcagcaggtc | 1860 |
| cageteetge | ctgccagtgg | cctctttagg | cccagctcat | tcctcacaac | ggccttccca | 1920 |
| aaccccattt | ttcccttccg | gcagcctctt | ggcctctaat | ttgtttatct | tttgtgtata | 1980 |
| aatcccaaaa | tatggaattt | tggaatattt | ccaccattat | atattttggt | aggtaaaaaa | 2040 |
| aaaaaaaaaa | | 099 | | • | | 2053 |
| aaaaaaaaaaa | agg | | | | | |
| <210> 900 | | | | | | |
| <211> 396 | | | | | | |
| | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | saprens | | | | | |
| .400- 000 | | | | | | |
| <400> 900 | | anaaatatta | tasttatacc | tataaataac | addatacact | 60 |
| cccacgcgtc | cgcaaggctg | cagggtgttg | tatassast | aaaaaaaaa | ttaaaaatta | 120 |
| cccacctggg | caacagagtg | agaccttgtc | ttataaaact | aaaaaaaaaa | actactaca | 180 |
| aggaaatatt | ctttcagtat | tcaagaacta | tteteeaagt | caycaaayaa | ttttatatta | 240 |
| tcattgacag | atgagttgaa | gttccaacat | atatgtctt | gttgtttcac | ttttgttta | 300 |
| tttgttaatg | caaacaaaaa | tatcaaccaa | tactctcatg | ggagetaaca | cicitigic | 360 |
| | ataaccatag | | | tggcaaaagt | caataaaagc | |
| attctatgag | aaaaaaaaa | aaaaaaaaaa | aaaaaa | | | 396 |
| | | | | | | |
| <210> 901 | | | | | | |
| <211> 916 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 901 | | | | | | |
| ccacgcgtcc | ggatgaagtt | tacattaatg | ttagtaatgt | ccttggagct | aagtcttcga | 60 |
| aaagtactct | caagtgtgta | ccctttaggg | aaatataatc | atgaatgaga | aactaggtgg | 120 |
| tctggaagag | gaatgatcaa | tgatgacact | tattccaagt | tctcagcctc | acagagcaat | 180 |
| aggagccagc | tcgcttaatt | tctctgtttc | catatttgca | aaataaggat | tatctgtgat | 240 |
| tatctqtttc | catttagtgg | ttgctctgtg | aaatatttga | aatcagtgta | gtggtgagtg | 300 |
| gatgataatg | gtgagaagcg | tttgggagct | agggaaaata | gaagtgtctg | cccctctct | 360 |
| gttttgctat | tcagtagctg | taactgtaca | gattcttcct | cagattgaaa | ctccacttcc | 420 |
| cttatttccc | ggtggttagt | cccactccto | ctcatgcgac | ataagaacat | atataataat | 480 |
| ccattttaat | atatttacta | accaggtest | tttattatac | aatattttgt | atacttaatt | 540 |
| cartcette | acaaatgctt | gcctactaga | acactatatt | aagtgctgag | gttgcaaatq | 600 |
| atttattatt | taactttcat | tcaacaaata | ctgtatttca | tctccatcta | ctacataaca | 660 |
| tttaatataa | tgggtgctga | gaatgcaaag | ttaagataga | aacttgacct | tgagaaacat | 720 |
| atataaaata | agagatacag | gaacgcaaag | taatacttaa | accocattta | tgtttatcat | 780 |
| atgtccagtg | ayayatacag | gayyaarada | thatatactaa | attatttast | gtttctgctg | 840 |
| tacattatca | tggctttttc | ctagtaaaag | ııaıyıaadı | gilalligal | gettetgetg | 0-20 |

| | | | | | | 000 |
|---------------|------------------------------|--------------------------|------------|------------------------------|------------|--------------|
| | catgataagc | tgccacattt | ccaaaataaa | gataaggaag | ttgtcattag | 900 916 |
| taaaaaaaaa | aaaaaa | | | | | 310 |
| <210> 902 | | | | | | |
| <211> 1860 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 902 | gggaacctag | aggtagtagt | tttataaaac | ttttcatcta | aaattcccct | 60 |
| ccacgcgtcc | aaccatactt | tacatatcat | toctttaatt | ccttttcttt | gtgagaggg | 120 |
| ttctgcaatg | ttaagttagc | taccatataa | ccatgacctc | agtgttctgc | aatatatgcc | 180 |
| ttcaactgtt | tttcatatga | catggatttg | agctctccta | ccatcctgat | catcttttct | 240 |
| gagtacattt | cagcttttct | atgccacata | aaacattgta | ttagaaacca | aaaatagtac | 300 |
| taaaggagtg | gtataagtag | gacagagtac | agctcagtgc | tgaaactagc | agtaacttct | 360 |
| agccttgttg | gccctttggg | gcttcacaga | ggaatggctg | tagataaccg | gagatgttat | 420 |
| tcggctggga | tgcgctagga | gacagttcct | tggctgttta | gtccagcatc | tgtcctgctt | 480 540 |
| ggttaggtgt | cgcgtttgat | aggtgagttt | tastttaatt | ctatotttoa | atacyctata | 600 |
| tataattett | gattttagtt cttccttgac | catchtaact | aaaaatccct | accagtcact | ctctctccct | 660 |
| ccatcctatt | ttagttttct | ttgtaacact | cacattccct | gatattatat | tagccttctt | 720 |
| tetettetet | cctcctcctc | cctcttcctc | ttctcttgtt | tcctcctcct | tttccttcct | 780 |
| ttttttcttc | ctgaactccc | tgtccttcct | ccttttctgc | ctcccttctt | tcctttctct | 840 |
| ccatctcttt | ttcttcctcc | ttccctccct | ctgtcttgga | ttttaagctg | cctgagggca | 900 |
| ggaacttgtt | caggaacttt | tgtttgttat | ccaaacactc | agaataatac | tgacacatag | 960 |
| acacatagca | gatgctcaat | acataggtgt | taaatggttg | aatacatgtc | cctttacatc | 1020 1080 |
| ctttcccctg | ccccagact | gtccagtttt | ataatggaac | gtgtttgggt | agtaactata | 1140 |
| aattcatcat | gtggttttat tgaaggatca | tagagatta | accetyaayy | gagtgctggt | accttcccaa | 1200 |
| cartecteac | catgttactt | ttctgaatga | cctttactgt | aatccatcca | aggagtcccc | 1260 |
| agccccacc | tcaagtgctg | ttggtaagag | agctttctat | ccaggaactg | tgactcataa | 1320 |
| ttctqccagg | ggaagctaac | ttcttgaata | agataagttc | tcataccagc | cacattgcgt | 1380 |
| caccatagga | gcaggaaaca | tgttgtaatc | ccctcagccc | atctggcacg | tactcatttg | 1440 |
| ccttccttat | gaagaggtgt | attgtgtctg | acagtgatgc | cacttcctag | ttggagggag | 1500 |
| aggaacaaaa | aggacatgtt | gttgacaaaa | acgaaaagag | caactggctc | tgggctagtg | 1560 1620 |
| ggggaagaaa | gaaatcattg | cgcatcttga | gggatcaacc | aacctctctg | catalgaday | 1680 |
| tattgccttt | tacaaggcat caggttccca | teteaacaga | aacacacatt | gatgtgagga | acaaagcaga | 1740 |
| aatattata | . caggitteta . aaaccctaaa | gcaatctaca | tacatatcat | attagtaaga | catttattt | 1800 |
| attetaaate | cttccatgtg | ggccttttaa | gagaatcctc | aaatataaaa | aaaaaaaaa | 1860 |
| g 0 0 0 0 g g | | | | | | |
| <210> 903 | | | | | | |
| <211> 1490 |) | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | • | | | |
| <400> 903 | | | | | | |
| cgaaaagatg | g ataatgatga | ggaggaggaa | gatattgatt | tttttgaaga | tattgattct | 60 |
| gatgaagatg | g aagggggact | gtttggaagt | aaaaaactta | . agtcaggtaa | aagttccaga | 120 |
| aatctgaaat | acaaagattt | ttttgatcca | gttgaaagtg | atgaagacat | aacaaatgtt | 180 |
| catgatgatg | g agctggattc | aaacaaagaa | gatgatgaaa | ttgctgaaga | agaagcagaa | 240 |
| gaactaagta | a tttcggaaac | ggatgaagat | gatgaccttc | aagaaaatga | agacaataaa | 300 360 |
| caacataaag | g aaagcttgaa g ttttaaatgt | aagagtgacc | totastassa | : cayatyatyc : ttaaatcctc | ctttcaaaaa | 420 |
| gatacaggt | g tittaaaigi a agatgaatga | aaayaadadt aaaaattaca | tetttagaaa | aagagttgtt | agaaaaaaaa | 480 |
| ayacayyado | ttcaggggga | agtgacagca | cagaagagag | cagagaacag | cctcctggag | 540 |
| gagacccta | c actttgacca | tgctgtccgg | atggcacctg | tgattacaga | ggaaaccacc | 600 |
| cttcaactg | g aagatatcat | taaacagagg | ataagagato | : aggottggga | tgatgtagta | 660 |
| cgtaaagaaa | a aacctaaaga | ggatgcatat | gaatataaaa | agcgtttaac | cttagaccat | 720 |
| gagaagagta | a aattgagcct | tgctgaaatt | tatgaacagg | agtacatcaa | actcaaccag | 780 840 |
| caaaaaaca | g cagaagaaga | aaatccagaa | catgtagaaa | ttcagaagat | gatggattee | 040 |

| atattattaa | aattagatag | cctctcaaac | ttccacttta | tccctaaacc | gcctgtacca | 900 |
|------------------------|-------------|------------|-------------|------------|--------------------------|------------|
| | ttatatanaa | tctgccagcc | ataaccatco | aggaagtagg | cccagtgagt | 960 |
| gagattaaag | cogregate | ggccccagag | gagatcaagg | aggaagtaa | acctogagat | 1020 |
| gragigary | atactacce | aacagctaca | gagaccaagg | gaaaaaaaaa | gaaaaagaaa | 1080 |
| ataaaaacay | ctgctgaaaa | aaaagagaag | gacaagaaac | gagagegaag | tassagaaa | 1140 |
| tatcaaaagc | gtatgaaaat | atacagcaaa | gagaagcgga | gaaaaccgcc | aaaacaccto | 1200 |
| agtgtagate | aagcagggaa | atacaycaaa | acagtagett | aggagaagee | cttaaagtcc | 1260 |
| accaaaactg | gcaaagette | cttcataaag | gatgaaggta | tagacaagge | tastaassa | 1320 |
| tctcaagcat | tctttctaa | attacaagat | caagtaaaaa | trastaset | cyatycaaay | 1380 |
| aaaacagaaa | agaaaaagaa | gaaaagacag | gatattttttg | tattatata | ttattatat | 1440 |
| | | aatattaatg | | | ttgttttgtt | 1490 |
| ttataataaa | attettgaga | accttaaaaa | aaaaaaaaa | aaaaaaaaaa | | 1470 |
| -010- 004 | | | | | | |
| <210> 904 <211> 783 | | | | | | |
| <211> 783 <212> DNA | | | | | | |
| <213> Homo | caniene | | | | | |
| VZ13/ HOMO | saprens | | | | | |
| <400> 904 | | | | | | |
| | caracttact | ggaacacaag | cactataata | ctgcaacaat | ctgataaccc | 60 |
| agagagtagt | gaggggaga | ctggtgggcg | atatatacag | cctggatgtg | ctggacaaag | 120 |
| agacagtact | aggregactaa | agagtggatg | gcacgagatt | tcatcatgct | gctcagaaca | 180 |
| atotocaatt | taaaatttat | gagttgttca | tttctagaat | tttctattta | acattttccq | 240 |
| actgcgcaacc | actotogota | actgacacca | tagaaagcaa | aactgtggat | aagggggac | 300 |
| taactgtacc | actgaggca | gcctcatcac | ctacaccctt | ggtttacttc | tcagataaac | 360 |
| traggaget | taaataacat | tctgagaatc | tataactaca | acatagtgag | cccaggagtc | 420 |
| ccaggaagee | acctactatt | aaattctctg | ttgctagctt | ggacctctct | cgatatctag | 480 |
| gaattgtctg | cagtatacaa | tggcacagta | acaaccattt | gtttctcaac | aagaatctga | 540 |
| taatuttuct | tgaacctcct | gaaccagtgc | tgcatgctct | gcttcttcat | atgtttgtcc | 600 |
| ttagatttga | ccaaaaacaa | taactgataa | tgtaatacag | attccccagc | tccctgtgag | 660 |
| ctagattaga | cccaggaagt | ctgtacaaga | gagcatgtct | actoggattt | aaatagccca | 720 |
| gaaacaggg | gccggaattt | cttatactct | tatactctaa | aaaaaaaaaa | aaaaaaaaaa | 780 |
| aaa | geeggaaree | | 090900000 | | | 783 |
| uuu | | | | | | |
| <210> 905 | | | | | | |
| <211> 1900 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | _ | | | | | |
| <400> 905 | | | | | | |
| gggacgccat | actaggaaac | ccaggtctat | ttgttatcag | agtaaggatc | aagccagata | 60 |
| gcctgttatg | taatttctcc | gataaaagat | tttgaaagca | ggtgctgtgg | gcatctgtat | 120 |
| ggggaatcgc | actcatagaa | ttattttcat | ttgtaaatat | ttggtatcag | gccaagcaag | 180 |
| ggaaagaagc | tttactgtat | taccatcttt | cctggaaaag | attgattttt | ctctctccct | 240 |
| taggggatat | gaggtatgat | acctgcaacc | aaaataagct | ggctgttaag | tgctctctcc | 300 |
| ttaactattg | tccaagcaat | gtacatcact | cttgcctaga | tgagtgacca | tactttttc | 360 |
| tttgctgctt | ggtttttcta | tcactaaaaa | gcaaatttag | gtggaagatg | gatgggtaag | 420 |
| | | aatttagaaa | | | | 480 |
| aaacggttta | ttcattggaa | aggcaagtga | gtggcagttg | actgtagaat | cttgggaatt | 540 |
| tttgaaggaa | tttaagagct | gtacttattt | taaataatga | ggaaacaatc | agagagactt | 600 |
| aaccagggtg | gcaactatgg | aagagtgggg | gtagaatcca | agtctacagt | tctacggcac | 660 |
| tgctttgttt | atttttcaa | tcaagcacac | atgagggatt | gcttaataaa | ctcaagagtt | 720 780 |
| ttctatatag | tttgggatta | ctacagacac | aggtactcta | gccatgtgac | tatttcagat | 780 |
| tagtgttccc | attgctctcc | atcctatttt | tcatatctaa | atgtgtcatg | attttagaat | 840 900 |
| ctctttgtaa | agaaaaccaa | aaagagccat | gcccaaaaga | atgagcatga | aatgaagcaa | 960 |
| ttcaagtatt | tagaatttct | tettetttt | | ttagggg | gagttaagaa | 1020 |
| agttcattgc | caacagttga | ggataaatag | ctctattgat | ctaggcaaat | gaatgagaag | 1020 |
| atttaaacat | catcaagact | cccaaagttg | grytaataaa | ayılyayalg | ttttgctaga | 1140 |
| cgctgagaga | aaaggcataa | alaggecatt | cacacttta | caaacadatg | aaattttgta acctggctca | 1200 |
| atgatcaaga | gacagcatga | tallataaaa | gattagagat | tagacasa++ | ttataacctc | 1260 |
| gagingtacc | tettattat | ctatasatas | arraaaaaara | tetatttaaa | tttgggacag | 1320 |
| cccaayccca | ccccccd | cigiaaaida | aggaaaaaga | geeegga | 2009994049 | |
| | | | | | | |

| | +~+++ > + > | aataatatt | atassatas | tttatcacct | aggtagttag | 1380 |
|------------------------|---------------------------------|------------|------------|------------|------------|------|
| | tgttttatag | | | | | 1440 |
| | tttctgtctc | | | | | 1500 |
| | tttgacttga | | | | | 1560 |
| | gacacctagt | | | | | 1620 |
| | cctctgaatc | | | | | |
| aattctgtca | gaacagtata | agcagaagga | agacattagg | tetttetgaa | acacggagec | 1680 |
| gataacttct | atcagttctg | aattetgtae | tgtcccaccc | ccaaatcatc | tatattgttg | 1740 |
| | gctttgtgcc | | | | | 1800 |
| | tgtttcttca | | | aaaaaaaaa | aaaaaaactc | 1860 |
| gaggggggc | ccggtaccca | attcgcccga | tagtgagtaa | | | 1900 |
| | | | | | | |
| <210> 906 | | | | | | |
| <211> 1900 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| .400- 006 | | | | | | |
| <400> 906 | | ~~~+~+ | ++~++-+ | 201220001 | aaddaacata | 60 |
| | actaggaaac | | | | | 120 |
| | taatttctcc | | | | | 180 |
| | actcatagaa | | | | | 240 |
| | tttactgtat | | | | | 300 |
| | gaggtatgat | | | | | 360 |
| | tccaagcaat | | | | | 420 |
| | ggtttttcta | | | | | 480 |
| | ttgtcaaaag | | | | | 540 |
| | ttcattggaa | | | | | 600 |
| | tttaagagct | | | | | 660 |
| | gcaactatgg | | | | | 720 |
| | atttttcaa | | | | | 780 |
| | tttgggatta | | | | | 840 |
| | attgctctcc | | | | | 900 |
| | agaaaaccaa | | | | | 960 |
| | tagaatttct | | | | | 1020 |
| | caacagttga | | | | | 1020 |
| | catcaagact | | | | | 1140 |
| | aaaggcataa | | | | | 1200 |
| | gacagcatga | | | | | 1260 |
| | taatttgctt | | | | | 1320 |
| | ttttctttat | | | | | 1380 |
| | tgttttatag | | | | | 1440 |
| | tttctgtctc tttgacttga | | | | | 1500 |
| | gacacctagt | | | | | 1560 |
| | cctctgaatc | | | | | 1620 |
| | gaacagtata | | | | | 1680 |
| | atcagttctg | | | | | 1740 |
| | gctttgtgcc | | | | | 1800 |
| | tgtttcttca | | | | | 1860 |
| | ccggtaccca | | | uuuuuuuuu | aaaaaaaccc | 1900 |
| gaggggggc | ccggtaccta | accegeeega | cagegageaa | | | 1500 |
| <210> 907 | | | | | | |
| <211> 732 | | | | | | |
| <211> 732 <212> DNA | | | | | | |
| <213> Homo | saniene | | | | | |
| -ZIJ/ HOIIIO | Parterra | | | | | |
| <400> 907 | | | | | | |
| | caggacaggg | agaccttoto | atggcggggg | agggaccctg | ttcgtaggga | 60 |
| | gcaagggctg | | | | | 120 |
| | gctgaggtcg | | | | | 180 |
| | ctctgcccc | | | | | 240 |
| | ctctgtgtgg | | | | | 300 |
| 3-3-003040 | | - 55 555 | - 333 | 5 55:24 | 5 5 | |

```
360
gtgtggccct ggccgagtcg tagccccctg gagcccagct tccatttcta taaaatggtt
gtttcgggag agaggggcag gctttctgtg tgactcggga gttcttccgt gagggctgcc
                                                                    420
agggggtggt gtgccaggac ctcaggctgg gcctttgtgc tggccttgca gtgggtgtgt
                                                                    480
ggggaagtca ctgtcccact atgggtctcc actacccagt cactgaccct gggagacccc
                                                                    540
                                                                    600
ttctgtgtgg gagggagcgg gggctggcta gcgggccccc cagccaggga tcccagaggc
tgagggttgg ggagaggaag ccatcatctc attacctctg tcagtgcagg ggtggctgct
                                                                    660
gcttcccttg tgcacttggg tcgctgtgat tgtgaataaa agtgatttcg taccaaaaaa
                                                                    720
aaaaaaaaa aa
                                                                    732
<210> 908
<211> 802
<212> DNA
<213> Homo sapiens
<400> 908
ggcacgagca aacccaagtc ttgagcaatg tttttctcaa aaagctgcta tccaatgata
                                                                     60
taggaaaata cattgtgttt tcctaaacac acttttcttt ttaaatgtgc ttcattgttt
                                                                    120
gatttggtcc tgcctaaatt tcacaagcta ggccaatgaa ggctgaatca aagacatttc
                                                                    180
atccaccaat atcatgtgta gatattatgt atagaaaata aaataaatta tggctctaac
                                                                    240
ttctgtgttg ctgtttatct tgttattttt cggcgttata ctaatgtgtt tattgagagc
                                                                    300
attttacctt ccagacttct catggctaac ttttggtctg tattttgctc cttagatgtg
                                                                    360
                                                                    420
aatatttett attagtetge tteetgetae geaatgaetg eatttetate attteteagt
                                                                    480
ttgttagtat atgtggatag tattctactg tataaatgat tgcaaagttt atcaaaaaca
aattattata tgtagctttt ctacagtgct ttgctaaacc atgtagtact agttaagtct
                                                                    540
tccttgaaaa taaagataca ctcttatagg ggacagttcc tgttcactcc caggaaactt
                                                                    600
ttttaaaaga tgacactgaa tgtttattgc actttagtgc agtgaagtgg caataaaacc
                                                                    660
taacatgaat caaggttgtt tatggcagat gcatgtgttg ctttacagag tttagcaaaa
                                                                    720
gctcttaatt ttatgtcata ctgtattcta ctgaataata aagctaacat tattcaataa
                                                                    780
                                                                    802
taaaaaaaaa aa
<210> 909
<211> 846
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (4)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (6)
<223> n equals a,t,g, or c
<400> 909
tatntncaag ctcgaaatta accctcacta aagggaacaa aagctggagc tccaccgcgg
                                                                     60
tggcggccgc tctagaacta gtggatcccc cgggctgcag gaattcggca cgagatttta
                                                                    120
ccttacactg aatgttctta atatgatttg gtacctaaag taattgaaaa aaatgcagtt
                                                                    180
tcctttaatc cttgactata agttatacta tgttgcgtac atggcaaatc ctgcaaatat
                                                                    240
agattaaaaa ttaaattagc ccattgaaat cctttataat tctgtcattt tcccaaggaa
                                                                    300
gaatagcatt gtacatatgc aatctttatt ttattcttta ttgcttatca gagtgagtgg
                                                                    360
atgaaaacat ttgtaaggct gcaacataat attaaaatgt gaataaataa atgttctgat
                                                                    420
aaaatagaaa agaaagtaaa ttacagtgat ttccatcata ttatcactct tgaattttat
                                                                    480
catctataaa atgagagata aaaatatctc actgaattgt tacttatatc aatttaaaat
                                                                    540
ttgctagtgg tttgaaaata ataatgtact gactacatgt atgctgttat tgtcagtgtt
                                                                    600
tccttctata aactgttctt tggaaaaatt aagttataca taaaattcat attaaacttt
                                                                    660
ttacagaaag catacatgat aaacagttta tggtacttct cagaatcatt tcataataag
                                                                    720
caatttattt agettaagtt ecaacttact gttettatta taaattgeaa ageaacetgt
                                                                    780
840
aaaaaa
                                                                    846
```

```
<210> 910
<211> 1434
<212> DNA
<213> Homo sapiens
<400> 910
ggcacgaggt ttcagggagg atggggtcga cccttgcgat ccccagaggc cccccatggc
                                                                    60
tecteetggg etggetgtet tecteetgtg ggttetgatg ceaectggge egaeggegte
                                                                   120
ttctcagccc agggcggccg cgcctccggt gagtttcagc tgagggcgcg cggccagctc
                                                                   180
                                                                   240
cgagcctggc tccgggtgca gcaccggcct gggacctctg ctgtcccgtg taggggtgcc
ctgcaaatat gtgatgaata agtgaagaaa tacgttctat cttctaactt gccggatgtt
                                                                   300
                                                                   360
agaaggaaac caagcttatg cttctcattt atagctaccg ttaaggattg gacagaagct
                                                                   420
tagctttttg ggtgagacgg acaacagtgt ttttagaacc tttggcaagg aagagctgga
aagaacatgt atttgaaagt gactgacagg tcttctggcc ctagggggcc acctgagcag
                                                                   480
                                                                   540
gtgcacccag cttccctcca agacagaaaa taaattaaga aggagagcag gaagggcccc
                                                                   600
ggcagactcc agacgggagg gggtgctgcc cgtcaggcag aaggagcttg gaagggaggg
                                                                   660
gccgtggcca tgggacgtgg aggtggaagc gagggtcatc ataggtctgc acactcgggt
                                                                   720
tgagtccccc ttccccatca cacacaggac agccagcagt gagctgctta ccccaaggag
                                                                   780
tcaagggggt tcttgggcaa cccctggtgc tggagccggc agtggacagc accgcagcca
                                                                   840
gaccttgctt atttttggct catgaggaac atctgtgacc gttccctccc ctggccctgg
                                                                   900
gaggggatgt gtgacctcca ctcaagacag ccatgcggct cctccggctg cgggcgggga
                                                                   960
gggcatattt cccagcacag gcccaggact gccagctgag aggctgggag gggcccctca
                                                                  1020
cccctagact ctgcgtgtga agccaagcgt ggagcctcac agggaatctg agatgggagc
                                                                  1080
cagtgagatg ggggcaggac ccagagggga gaagaggtcc tggggatgct gtggatctgg
                                                                  1140
atccagcgtg cgggagctga ggttccggag tgaaacactg cctttcatgg aagcacgtct
tcctgtcacc catcggcttc attttaaagg atgaaaatgt atcagacatt caaggagagc
                                                                  1200
tgcatcacat aaaagaaaga ccaggcaaag aaacggaaaa taaatggatt gagaaatgtg
                                                                  1260
                                                                  1320
aatgactcca atcattccaa tcattggaat gaatggattg gatagaactc caatccatag
actcagatta gggagatata tttatataat aagaacagga aactgtgaag atgaaataag
                                                                  1380
1434
<210> 911
<211> 761
<212> DNA
<213> Homo sapiens
<400> 911
ggtacagcca gcacaaaggc ccgagcttgc tgtgttcaaa gaacagacaa aaaaaccgca
                                                                    60
tggttgaaat gtaatggagg tgtgatatgt aagatgggtg tggagaggtg caaggtggcc
                                                                   120
agcccacatg gggcctctta aagactgtgg ttagacaggt ctacgaaaat gtcagaaagc
                                                                   180
tttcaacagg gaaatgttga catcaggctt catttttcag aagatctggc ttctgtgtgg
                                                                   240
agaatggact atgttgggac aaaagacgaa gtgaggagat tagatagatg ccaattttac
                                                                   300
                                                                   360
cagctccggc aagagaggtt gaggcttatg cttggttagc actggaagtg aagaagtagg
                                                                   420
agcagactgg attetttet atcagatttg gagtaccatt agccgtataa atcattgtgg
ggcggggaat gcctggtgcc gtggctcgtg cctgtaatcc cagcactttg ggaggccaag
                                                                   480
                                                                   540
gttgggagca ttgcatgagg ccaggagttc caaactagtc tgggcaacac agcaagaccc
                                                                   600
tgtttctaca aaaaaataaa attaaaaatt aggtagacgt ggtcacatgc accagtagtc
                                                                   660
ccagctactg ggaaggctaa ggctggagga tcttttgagc ccaggatttt gaagctgcac
                                                                   720
tgagccgtga tctcaccacg gcactccagc ctgtgcaaca cagtgagacc ctgtctcaaa
                                                                   761
<210> 912
<211> 441
<212> DNA
<213> Homo sapiens
<400> 912
ggcacgaggg aagggggtgc ttggtttgag gggttaatgt gaggcctttt tgaaaaatga
                                                                    60
atattttgat aaaaagaatt cttgttttag cacagttgat gcacataagt gattctcata
                                                                   120
                                                                   180
tttgttgtat aaactggttt aatacatttg gaacatagtt ggattacatt catttcctgg
```

| aaaaagttca tctttctgaa tgtcaaaaat | ttctgaaatt aactgttggg | ttcaagttta atttcattta ttctaggcat tataaataaa a | cctacagtga tcctgagaaa | aataattgtg ttgaaagtgg | aactaagtag ctacctttca | 240 300 360 420 441 |
|--|--|---|---|--|---|---|
| <210> 913 <211> 452 <212> DNA <213> Homo | sapiens | | | | | |
| gacttttta ataattctgc ctttacctag cttgtttgtt aagtagggca taaaagaaaa | ttaaacccta agtggtagaa ataaccagaa ttttattgaa gtgaccacac tatttctac | taaggcatgt aataatcata atttaacagg ttatgtgact gtttgcatct ctttatataa aattacagaa aaaaaaaaaa | tatagctttt ggaattttat tgtttgttga caaatgataa ctattattac tcctcagaac | ctggtttatt ccataactat aagtaacatg tttaaagttt cttgattaat | aatgtataga caatttcata cgttgtatga ttgttagtga tgctacattg | 60 120 180 240 300 360 420 452 |
| <210> 914 <211> 1699 <212> DNA <213> Homo | sapiens | | | | | |
| ggatcctaat catggcatcg ggaggaaata gcatgagaca tatttccta cccttgtcct cmctwgcctg ccattttaac tcaggttaac gcccaggatg gcaaaatatt attcctgaaaa tttccctgat aaagtgcttg aatttgcatgc tgatgaatga agagtaaggg cttctttact | gaatgcettc aattgtgtag aggggaaagg tagcattact tttettteet cetetgattg ttteeceagg cagtteecet etgeageaea geetgeatae geeteaatet tacateteaa atgtggtatt caageetgaa geattagga tggeaaeaag cagaageage tgttagtatg | ttaatacttt tgtattgttg aggtgactga aagacagaaa aattggctga gtcccaaagc ttacagctgg taaccatgag gactccagcc gttgtagtaa ttgagctgat ggtattcctc agagaatctc cctctcattc agatgtaccc atctgtgttt tgaaaaacta agcatctaac tggatccaga accagcaaga | tattccatac taaatacaag gaaagagaaa ggaatatcaa taagcaagag atcagggtcc caccttgagc tttctgctca acagacaaag ctactagccc actctttgkt acagtcctca ttatttcatg tttgccacat ccaaatcttc ccctgcttgt cctgggggca tgggcttctg cattaaaaaaa | tagttagggc aaggaaagaa ggagagaaaa agttagtatc tggaattatc tattaattgw taagtcccyt ttttattgca gcttgcgatg tttgcaattc aattctgtct aaatctctta agaggtacaa tcagttctat agaaaagtgt agcagaagct cagagagaca ttttgtacg tattccttt | ctaacaaaag gaaagagtgg agtcaacaga tctacctat tccccaaagt tgrtgasggt ttcttagata tacacaaatg tctccacact acaatgatgt ttcaaaatac aatttcctg ttgtataaaa gcccttaggt cttagtcct taaactcctg gggactgaga atcatgatcc ttccaagacc | 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 1080 1140 1200 |
| atataaggaa gatatgagtr ttagtataac aaaataggcc ggcgggatca gtctctacta actcgggagg | ataaaactat kttattgctt agtatgctct aggcatgttg cgaggtcagg aaatacaaaa ctgaggcagg actgcactcc aaactcgag | ttagcaatct aatagtggac tccacttgct gctcacgcct agatcgatcg aattagctga gtatcgtttg agcctggtga | gatctctctt tcttcaatgc tcaaaacgtg gtaatcccag agaccatcct gcgtggtgac aacctgggag | cagaatgctt cagcatccc ctttctgatt cactttggga ggccaacata acgtgcctgt gcggatgttg | ttcattaaaw cagtaacaaa actgtcataa ggctgaggtg gtaaaacccc agtcccagtt cagtgagccg | 1260 1320 1380 1440 1500 1560 1620 1680 1699 |

```
<220>
<221> SITE
<222> (806)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (923)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1607)
<223> n equals a,t,g, or c
<400> 915
gttgaatttg acccaaagtc aggtggtcag ttcatattga aaacatagaa aatcatttgt
                                                                       60
cactttaaat gttcatgctc agtcatttct ttaccacctg tctgtgtgca acttggaaat
                                                                      120
                                                                      180
ttctggagca ctgatgactg tgcatttgtg atttccttta ggatgccatt tccatttacc
                                                                      240
aattgctttc ctcagcctgc aattgtgtct tcattctgat tagtttattc catttagatt
                                                                      300
ttaagaatga tagttgatga ctgccttttt cccaatgtta caatagtaga aatgtggtat
                                                                      360
cttacatttt ccaaacattt tcttctcctg ggctttcctg taccgttcag tgatggagag
                                                                      420
ctcacagttc ctattgagat atttattttc attactatcc ttacatagaa cgcatttcca
                                                                      480
gaactttttc cttccatkca acttatagct cctctttaaa aacaaaatta ttctatactc
                                                                      540
catgctttga tactctaaat tcaaccggtc atatttttt ttcttttcct ttctctttga
ctggtcaatt cagaaaagga agtccagttc gagtgttcag atgatggtga ggatctatct
                                                                      600
gccagatttc tcctcctgtg aaaattcaca cttaggaata aaagtcttat ttacctaaga
                                                                      660
tagtgtaagt aagtggagag ggtgtaggaa cattacaggt cagtgttagt caactatcaa
                                                                      720
aacacqqtac ttctcttaca tattacattg ttttttctct gaaattgaat ttgttataca
                                                                      780
tgtagatagt atattaagag gtttgntctt ttacaaagtc aattttctct ttgaaaataa
                                                                      840
                                                                      900
aaagaccatg acagaatgaa tgtctgtata gtgatcagta aaaacaaacr aacaaaaaac
                                                                      960
tatatgtttt ttttaatgtt ctntatggtg gctaaaatag gagtgrttta taggacaccw
taatacattc accatggagt ttataaaggt gtgaaagtga tcttacaatg taccaatcct
                                                                     1020
                                                                     1080
agttaagtac ctttaaagga aatgtttatt aaccttcaaa caataaattt aacacctgag
                                                                     1140
aaataggaat atcttgccca tgcctcataa gagtaattca gtgcatcata caattatctg
                                                                     1200
atttgattga ttcatgattt tttaaaaaag aaaacacctt gcttctatta acataaaata
attatatcac acaaaagtgc cagagttttt gtatttttaa aagacatcta tgggccagga
                                                                     1260
gcggtgtctc acacctgtaa tcccagcagt ttgagaggtt gagacagacg gatcacctga
                                                                     1320
gatcaggagt tcgagaccag cctggccaac acggtaaaac cccatctcta ctaaaaaaaa
                                                                     1380
aaacaaacaa acaaaaaaca gaaattagcc aagtgtggtg gccgtacctg taatcccagc
                                                                     1440
tactggggag gctgaggcgg gagaatcact tgaacccaga aggcagaggt ttcagtgagc
                                                                     1500
cgagatcgcg ccatggcact ccagcctggg caacaagagc gaaactccat ctcaaaaaaa
                                                                     1560
aaaaaaaaa actcgagggg gggcccgtac ccaatcgccc tataccntct at
                                                                     1612
<210> 916
<211> 963
<212> DNA
<213> Homo sapiens
<400> 916
ggaattcggc acgaggtggg ccagggcgag aatgtcacac gttaagggct gatatttagg
                                                                       60
                                                                      120
cacaaagggg aagggccctt gctgtgtgtg agctaggggg tggcatgaca tgcttggctg
ggctcatggt tgctatttct gcagatgtca aagaagttct gttaactgat gggaatgaaa
                                                                      180
                                                                      240
aggccatcag aaatgtgcaa gacatcatca caaggaatca gaaggctggt gtgtttaaga
                                                                      300
cccagaaaat atcaagctgc gttttacgat gggataatga gacagatgtc tctcaactgg
                                                                      360
aaggacattt tgacattgtt atgtgtgctg actgcctgtt tctggaccag tacagagcca
gccttgttga tgcaataaag agattactcc agcccagggg gaaagcgatg gtatttgccc
                                                                      420
cacgccgagg gaatacttta aaccagtttt gcaatctagc tgaaaaagct ggtttctgta
                                                                      480
                                                                      540
tccaaagaca tgaaaattat gatgaacaca tttcaaactt ccactccaag ttgaaaaagg
aaaacccgga catatatgaa gaaaaccttc attacccgct tctgcttatt ttgaccaaac
                                                                      600
```

```
atggatagaa gattaagctt ctcaaagacg aagaaacgta tcaagtgcat agggaatatt
                                                                     660
tttacaaaaa cggaaatctg taaggggtat aatcgcctgc ctgcgccctt tgcagcattt
                                                                    720
cacgtgtggg ctatggactc cacctgtcct cacccacgtt attccccagc tgccctctcc
                                                                     780
agetecetee eegeetettt ttacaetetg ettgttgete gteetgeeet aaacetttgt
                                                                     840
                                                                     900
ttgtctttaa atgtgtataa gctgcctgtc tgtgacttga atttgactgg tgaacaaact
960
                                                                     963
aaa
<210> 917
<211> 2234
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1337)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2228)
<223> n equals a,t,g, or c
<400> 917
ggaaacagcc acctctgtcc acggtgcccg ccgatggata cattctggag ctggatgatg
                                                                      60
gcaacggtgg tcaattccgg gaggtgtatg tggggaagga gacaatgtgc actgtggatg
                                                                     120
gtcttcactt caacagcaca tacaacgctc gggtcaaggc cttcaacaaa acaggagtca
                                                                     180
gcccgtacag caagaccctg gtcctccaaa cgtctgaggg taaggccctt cagcagtatc
                                                                     240
                                                                     300
cctcagagcg agaactgcgt ggcatctaaa gtggctggca agcccggagg taaccccacc
                                                                     360
actgcccaca ttcctgaagt gtttccatga cttgctctgc attctgcaca gagccgctgt
tcctctcctg cctttagaga gcctatggta tgtggatgtg atcaaaccaa agattccaca
                                                                     420
tcggcagttc caatggcttg ggccggcggc ttcctttgat aacaatctaa ataagctgca
                                                                     480
gttgaagaag ctgaaaaatg aaggcctgaa tgtgcccctg gtgtgtaaga caaatgtatc
                                                                     540
                                                                     600
taggctctag agcaggctcc cattctccac cgatacacat catgtgccag ttttgcccag
atgattctaa attactctgt agtacttgct tgttctgagg gtgggaccta ggttctttcc
                                                                     660
agtcgtggat ttgtatgact gaatgtgttt caaatgggtg gtggggtgct agagctgttt
                                                                     720
agagagggcc tgttggctgc tcctggctta cccacttaga ctgcctccgt ttcataccca
                                                                     780
aagcggaggc cgtcagcacc aggattgaga cttcctgtgg gcaccaaaca ggaagagacc
                                                                     840
agcaacttcg cattacccgc cattttcatc tttgccagtc ccttcagtct tggctaggct
                                                                     900
accgagagcc accatacaag gttcatctct agagaatttt tgcttcttag ctatacttta
                                                                     960
aatattttgg tcatcaaaga caagtaatgt gtctcagatg agaggcttga atttgatggc
                                                                    1020
cagatataac ctctgaggct tttaacattt tcattttaag agtaagcaag acacatgaaa
                                                                    1080
                                                                    1140
ttaaacctac aaggaggtat ttgtggctgg tgccaaagca ttctgacact ttggggtgtc
attttaatca aagaaatcac cccccacct caccgggatt ctccataact tccctctgca
                                                                    1200
gaactaatta tgktgatttt gktcaagttc aagatgktag ctaaaagaac tatggtggtg
                                                                    1260
ttttttttcc cacttcccac aaacctcaac atgtgccagt caccctaaaa tgcttyacat
                                                                    1320
ggttaaaaac aagcacnatt ttgaatccta cagcaaggat gaaaggcccc tagccgtgaa
                                                                    1380
aacagtgctt tggggagcag ttgtcagtct aagtgatgct attccaagag aaggatatgc
                                                                    1440
tgagggaaaa tgcccacatg aacctgttcc catttggagt acagtgatgt ggtagctaca
                                                                    1500
gcttccccca gaattatcat tttagcacct tctctcaggg atgacctatc agtttgagag
                                                                    1560
cagttgcctc ttttctcaaa ataccatact aactgctaaa gccctccaag agtctttcct
                                                                    1620
agatgcaacg cagaaggccc ttgctggtga tggcctcatt tcccatgtgt gtacaaggtg
                                                                    1680
gtttgattga agagtgaagt gcatgcctgc agagcagaga gaaatttgta gcaatgttgc
                                                                    1740
taatatgtgt tatcagatct gcgggaaaac tatttctawt cataatacay catgggaayc
                                                                    1800
atactattct ggtaaaaatc agttattagc ataacagcct gagcacttat gtctctcgtt
                                                                    1860
tcatcctgca ggaggatgta gcgcctcagt ttattttaat gttcataaga ttatggtgtc
                                                                    1920
taatttaata aattacagga ttggaactgc gatccttggt accacagtca cagaactggg
                                                                    1980
ggtcattttc ctagatgaaa caaacggaac aagttctctt ccaacaaaga aactgtactg
                                                                    2040
tagaaattaa tttcctccat gaattttata tattgtgtac aaatataagg tatgtatctg
                                                                    2100
aatacaaaga aaagcctatc atcatataga tatcagtatt ctctgttact gcacagaagt
                                                                    2160
aattttctca tgatgaaata aagttcacac acatactttc tccataaaaa aaaaaaaaa
                                                                    2220
```

```
2234
aaaaattnct gcgg
<210> 918
<211> 1661
<212> DNA
<213> Homo sapiens
<400> 918
ggcacgagct acactggaag tggggagggg cagtgtgctc tgggtagctg tcctcctctg
                                                                      60
taatggcagg agctgggtat gcctcgtgac ctcttggact cctgctcaca ttatcactgc
                                                                     120
tgccttccca gatgagctgt gcaaatagat ggcggccatg agtggaattg gaaacgaggt
                                                                     180
tggagggagc ttctgtctgt ccagtttggg gcctgccaag cctggcatgg tgagggtatg
                                                                     240
gtggagccag gaggggccac tatgggagcc gggccaggaa gctgcattct actgagcctt
                                                                     300
ttacctcttg caaggacctg cctttcagga gacttcggtc tctaaaggcc agggatggaa
                                                                     360
gcttcaggga gactctccag ctcctgttta gctctttggt tcagacctaa gtggcgagcc
                                                                     420
                                                                     480
acttgactgg atgggacctc cagccagcca cagcattgga atccagcctg gctcctgcac
                                                                     540
tgcctttcat attgatgtcc atgacaatcc cagctgtctt gcagtacatg gcacaggcag
ccctggcatc ttgaggaggg tgttcagtgt ggtccctggc agaatatgag cctggggcag
                                                                     600
acaggatgtg gctttagacc gtgaacaggg agccatgccc caggacatac gaccctgtgc
                                                                     660
                                                                     720
cccacactcg cccacactca ctcctggtca ttaatcacag tgctcatggg cccctgattc
                                                                     780
aaaggaagtg ccagctgtac atgggcccaa tgaactttac tcaagattag aggactgttt
aggggcattt gaaatgaatt gtggaaagga catttgtgag accatttgaa aggtcactca
                                                                     840
ggggtggtac aacaggataa ataatgaacc cattacaagg ttctagtgaa ccactgtggc
                                                                     900
cttgggaact gaatttcatc actttggaag ccagagaaag gcactggaaa tagctttgcc
                                                                     960
tttgcacaga ggggagtttt cttctgctta actggatcca attagaaagt gattcaccga
                                                                    1020
acacttattc tgtgcgaggg tcttacagta aagactcagt gtggcaaggc ccctgttttc
                                                                    1080
caggacttta caatcctagt tgggagtggg gtgaggtcag gggtgtgtaa gttgaacact
                                                                    1140
atgatgagag caccctgagg cggatgcagc cagctccctg tgaacatgga caacatgaca
                                                                    1200
gggctgggtc tagacactgg aaatgggtcc acctggttta ctagacttga gctgaaccca
                                                                    1260
tttgtacaat tagaggaatt tatctattca ccaaatatgc atatctcttc aattattaaa
                                                                    1320
gactaccatg tcctactttc agtcgcccag aaatagaccc tgcaattcca gtgccagtaa
                                                                    1380
                                                                    1440
ctcatgtcag aggtgatccc tggagacact gcaggagagt gggacaggaa gacagggagt
                                                                    1500
gaaggtaggc agcaacggtt ccttatccca gcaagtcatg agtatggcag ccaggtctca
tcctgtacag aatagccctc agcatcatcc ccaccaaggg gcaaggaagc cgggtgttca
                                                                    1560
ttcccccacc tccctctgtc atttgctgag ggctgcattt gaggcattaa ctacccaggg
                                                                    1620
                                                                    1661
<210> 919
<211> 533
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (515)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (525)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (528)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (529)
 <223> n equals a,t,g, or c
```

```
<400> 919
                                                                       60
ttcggcacga gccaacttct atataactca ggaatttact ctcaaacaac actgtcaatt
                                                                      120
agttacttat ctctctggaa atgatctggg aacatggaga ggaaagggag gaaggggcaa
                                                                      180
aatctgacca cttaaatcta agcatattag atcattttat gctagaaagt cctgaatgat
gtgactttcg ttcttgtaaa acacctcttt ccatagattc atggcccaaa cagtatataa
                                                                      240
agagtgggga aggaactgca tttgcaaata gttcaaatca ttgctccatc ttaactacgc
                                                                      300
agttcacaaa gtgtgaagaa atttgatcat ctcaaaaaag ataatgggga aaaaatatgt
                                                                      360
                                                                      420
tttgttctgt gactttaaag tcttgcaata ttttacataa atgataatgg gtgctttaat
aagaactctt gatacttttg ttattgtatt caatatatgc atataataca acaggaaaaa
                                                                      480
aaaaaaaaa aaaaacycra gggggggccg ggacnaatcc ccccnatnng aat
                                                                      533
<210> 920
<211> 2099
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (2090)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2091)
<223> n equals a,t,g, or c
<400> 920
                                                                       60
ggtgccattc cacaggtaga aacactcaca tgtgcttaga aacgctctgc tttcctcctt
gattacccaa attctcattc tgagcttcta tttctccaga tctagactcg ggaatttaat
                                                                      120
                                                                      180
atctgaagac tcatataggg ctgatctacc ctaacttgca aaatttcatg catatttcat
                                                                      240
acttacactc ttcatatgtc agtggtgcta ttgtttggtt actttctcta tctgtgtggt
                                                                      300
ttcatcacca gtctattcac ccctatataa aacttaagat ttgagataag aactggaatt
tawatgactt mggaaagaat gtatcttggk tagaatataa gagtctgaaa agtctgctgt
                                                                      360
                                                                      420
gggtgctaar ctggctacta agggaaatgc tamcagaaat ttgtcatatg tcttcagagt
attgtctggc aactgattaa aacagaggaa gagtgaaaca acatctgctt ctctccacct
                                                                      480
cacactgata aaatggttga ataaatgcac tttgcttatg gccatgaaga acacagggga
                                                                      540
cttcatcttt ccaagtgttt tcatacaatg ctcaaggcta attcttttgg tcctgatgtt
                                                                      600
ttatttctta gcacctgctg gatcaagaag cacccacaag gatcatttct caaaaatgtc
                                                                      660
tgaaactata tctattctga ctatgaacct tgatcacaat tcaaaccctt aggctactgt
                                                                      720
tctgattgtt ttcagcatta cccactaact tttgctttct atttccatat tctgtattct
                                                                      780
gggggcactt tttatacaga gtctgaaagt gctattcttt ttttttttt tttgagacgg
                                                                      840
agtctctctc tgttgccagg ctgcagtgca atggcacgat tttggctcac tgcaacctct
                                                                       900
                                                                      960
gcctccggtt caagcaactc tcctgactca gcctcccgag tagctgggac tacgggcgtg
                                                                      1020
caccaccaca cccagctaat ttttgttttt agtacaggcg gggtttcacc atgttggcca
ggatggtctt gatctcttga cctcctgatg catccgcctc aggctcccaa agtgctggga
                                                                      1080
ttacaggtgt gagccactgt gcccagcccg aaagtgctat tcttattatg acctacagtg
                                                                      1140
                                                                      1200
gtaatatttc acttaaaaat cagtgctatg cccattgctg gttaacaagc tttggagaag
tattaggttg aaccatagaa actgccacaa ctgttcaaat attgaaaatt ttatatgctt
                                                                      1260
cagctcatag tctccttcac acacattctc tttcatattt ttttataatt ttatttttg
                                                                      1320
                                                                      1380
tatgacttaa tgggcacatg ctgatttcct gtatgtcgtc aacactcctg agccatgagg
gtaagatcag agctgcagga gtccagacac gtactttgtc gcctgccaag tgaaagacaa
                                                                      1440
                                                                      1500
tgaatggagt tatctaaatt ttycagtgaa ctttttggtg tctatgttgt ctaattttat
tcccttactt tgtgtttaag aaagatctaa tacccacaga gaataccaag gctattaaag
                                                                      1560
tctaagcagg tgacctacct caaagcttaa gttcctgtta tcataggcct cgtttctcaa
                                                                      1620
atttgtataa atgtacatgt gatggaaaac cagaagatgc ttggtaaaca tggtcagttt
                                                                      1680
tactcaatga tgaatggttt cagtcatttt tttgtattaa aggaaacata aatatactat
                                                                      1740
ggagtaaaat gcaaacacta cacggttttt taagataaat tctgacactt gaaaggcatg
                                                                      1800
ttctgcattt agggctattg ccagccccag aaccatggga tgaagtttta ctccttctgc
                                                                      1860
tggtagagga agtttagtgg aaggtttgag aacctgagcc ctgagtgtag gaaatgcata
                                                                      1920
 gaagtagcaa agtctgaaca acactgagaa ctacacagta aaattagcac ataggattta
                                                                      1980
```

```
ttatcctttg ttgaatgagt atatgagtat atgatgatgc tgctgatgat gatgacaatg
                                                                  2040
                                                                  2099
accacgatga tttaaaaaaa aaaaaaaaaa ctcgaggggg ggcccggtan ncaagcgcc
<210> 921
<211> 1861
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (54)
<223> n equals a,t,g, or c
<400> 921
gagcaagtaa tgcccccagc gcccccagcc cagcccactc cccgcatggg aggnccgcca
                                                                    60
ccaccaacac ctcatcatcc ttctcatcgc taacaccacc acctccatcg gcacccaagc
                                                                   120
                                                                   180
gggcatcatc cccccacact gctcagggga ggggagggat caggcgatga gactgtgagg
                                                                   240
ccaaaagaag ggggcctgtt ggaggctggg aaccccgcag cgcgaggctg cctcatcaac
ggcaagagga aaggaggggt ctcgggacat ctccagaccc taccaactgg gagggtcccc
                                                                   300
                                                                   360
tcctccttcc ctactcctgg gacggcagca aggacatggg ggctgctgtt agcttctccg
tcagaggcct catctcactg tagccctgga acccagggtc catcttgccc ttcccccatc
                                                                   420
catggttggg aaagaagctc agcccctcac agtggcctca agtgtgatgc cttacaaaag
                                                                   480
caccactcag atgggcagct ggactctggt gtcctgagac tctgccctct tcccacagcc
                                                                   540
tccctgcccc acccatccct gcaaagccat ttttcagaca gagccattcc taagaacact
                                                                   600
                                                                   660
qaaqqqctqq aatgctggct ggccactctc tgcctcagtg gcctccctac agcctggaag
aaggagggtc ctgattgcca aggaaacctc ctcattgggc taaggagaca ctggagtctg
                                                                   720
gagtgtggag ccccacagtc ttgcaggtca catgctctcc ttgcacatct ggcctggttg
                                                                   780
tacccactgg cctctgcctc tgccctgggc caaaagggcc cctccttgcc aggggagaga
                                                                   840
cagccacggt cctctttggc cgatgctgta ttctcatttt ggcccttgtt cttaggcccg
                                                                   900
tctgcccgcc ytcctccatc taacctttcc tgttttatcc gcagcccttt tcttctttga
                                                                   960
gttagtaaag atttattetg taacetgaca etcatetgge eetttgeagt ttgecageea
                                                                  1020
tattcccatg tgatttccca ctggatccag gcccccatcc ggctggcagg agggggctct
                                                                  1080
                                                                  1140
gacgtrcagg ttggaaatca gaagtctgtg agagcgcggg agtgcatggc agctctgggt
cccagacctg gcccgacccc tctgcttcac ctccagctct gctgctcctc tactcttggg
                                                                  1200
                                                                  1260
tcgagatccc tttggagcca cagcgaggaa ccctgtggtc ctcaggcagg tgtaccttga
                                                                  1320
gtcagccagg agccctcttt tcctgtgtca aagcctgccc tcgggctctg ctcacctctg
                                                                  1380
gtgaccctcc aagatgcccc tgccctcagt ttcccctcat gatctggcct ctgccccctt
                                                                  1440
ctctagccac agcctctagt acactttagc aataccacca gactagttag agttccccac
                                                                  1500
tcaccaagca agacatgcag tttcatgcct ctgtgccttc gctcatgctg tttcttccga
ctggaatgcc ttcccctgct cctcctgcct tgtctgcctg gcaagttcat ctctcacgat
                                                                   1560
                                                                   1620
tctgcacttt gtcaatgctt ctcttgtggc acttatcaca ctgtatttta cttgtttaca
                                                                   1680
                                                                   1740
tgtttgtctc cccttctaga ctgtgaatcc ttaagggcat ggactgtatc ttatgcatct
                                                                   1800
ctgtatttct gcgcctagca cggtgcctag cacacagtag gcgctcaata aatgttgaat
                                                                   1860
1861
<210> 922
<211> 993
<212> DNA
<213> Homo sapiens
<400> 922
                                                                     60
agaaggattg ccccagagac ccgtggtgga cttcatgggt gctgagtggc ccgtgtgaca
gtgatgacac gaaggetteg gegtttgagt gggtgeaggt geacgeeagg gettggtget
                                                                    120
tccctgcctg gccctggagg gagctgggtg gcctggcttc agggggaagac aggagccagg
                                                                    180
acacacgtca gcccagcagg tgtggggggt gctgcagccc tcggcagtgg ggtcaggccc
                                                                    240
                                                                    300
tgggggatgt ttccaatggt gggcagcctg gccaggccgg agaagacatg ttcacgggca
                                                                    360
tctatcagat gcccccttga ggaggctgag ttatttgagg gctgctgcaa agtacgctag
                                                                    420
gctcaaattc tcttttccca gccagagccc tggccacacg gactcagagg ggccaccggg
gtggggaaag gacccctccc cgaccccccg cagccactgg cctccagctc tcggccacag
                                                                    480
```

| aatggcetet aaggetgaet cetggeteagg eeeeggagee teetgggggeeg eeeaggeeaa a gaggeaagae eeeteeggeeg eacatgeaeg eeettteeee tetteteag eeataaatart camtggggee g | gtgcagett geceatggee caaggteat tggeeggee ttgagtgee teettgttat tetetageeg acactgggte cetttteet tgaaggeate eegeageace agetgeeetg tgtaacetg gagagteage | ctaggcagcg a tggcctgtgg a gacaccaagt g ccaccacaca c tggtagaccc g agctgcttgt a | aggggacagc atagtggggc gactacaagg cagtgactgt gaagccacgc acaaccaaac | 540 600 660 720 780 840 900 960 993 |
|--|--|---|--|--|
| <210> 923 <211> 1080 <212> DNA <213> Homo sapiens | | | | |
| quattegge aegaggtgee eagatggtga etceatttta ttaaataaaa atteettgag gttaatttteet ecteacegaa teagttggega geaeteeaea tagaceaatg ggtggagate ttetgteggt tgteagaaet tegteggat teetateggat teetateggat teetatega gttgaaaet teetategaat gettgeagaat teetateggat teetatega eaceteeag aeagaaatg gatggaattt teetategga taagttgaa geaeceteeag aeagaaatg gatggaattt teatatega taagttegaa gatggaattt teatteete gatacetee teatteete tea | cattitgctt gccttgttgg ggtaggacta tgttaagagt ctcttcttcc ccaaccaaac ggaaagagat accattgcta ccttttccca aggacagttt cgcatgacgt ttatagtcac caatattaaa gtcaacagaa ctagcatct atgtctggtg gataataagt aaccatacta gaattccagaat gtttcatact gaattccaga ctaccatggc gaaaaggtat ttacatattt cttagtgatc ctccagtggc atgttctcta atgctctaga cttgttagaa ataaagtggt | ttagcatttt agatctcttt caattctttg tcaaactaag tcacttggca cacatccttc tgtcctcagt tccaaggatt cgtccttttg tttttccta aaaagcaat ttagtagaat tgctgagttt attttggtc attctacctt ggttttttt | tccctcatcc acgttttctt gcttctgttg aactctgcag ggagaggggt aggctgtgtt tttaatgcat ggatgtgcat aaagtttggg tagctttctc gaactgttta acttttata agtatatcaa cctttgttat attttgccct tattatagtg | 60 120 180 240 300 360 420 480 540 660 720 780 840 900 960 1020 1080 |
| <210> 924 <211> 955 <212> DNA <213> Homo sapiens | | | | |
| <pre><400> 924 ggcacgagtg aagtttgatg t taattcatta tatggatatg t gtcccacttc ttggttatga a gacatatgtt tttatttttc t gcaactctgt ttagcttttt t ttctgttttg ttcagcagta t ttattacatg tctttctgat t ttgattttc tcagatgact a catatcttc tttggagaaa t ttatcttta attattgagt t cagatataat ttgcaaatat t ttgtctttga agcagaaaag c tttcttttt tttatttgtt t gagtgcagtg gcgtgatctt c ttgcttcagc ctcccaagta d ttgtatttct tttttttag d</pre> | tcacatttta tttattcata atgttgctac actaaacatt tggattatgt actcaggaat gaggaactgc caaactgttt tataaagggt ccaatttctt actgatattg agcatctttt tgtcattca aatcctttgcttaagggtt ctttagatat ttgtttaattt tgatgaaggt tttttaattt tgatgaagaatgttttttt tgatgaagaatgtttttttg accacagtcggcttttgca acctccacctgctgggactg caggtgtttggaggactg | agttgatgga tgtggacaca ggaattgctg accaaagtgg cgcattttgg tgaattattt catatagttt ccatgttta tctagatata gtttttcac gtccaagtta ttgctctgtc cctgggttaa ccactacacc | aatttggatt tttttgtgtg ccttaatatg ttgtaccatt ctatcacttg cattatggct ttgatcattt attgggttat atttcttgc ttcattgatc tctattttt gctgaggctg agcaattccc tcgctaattt | 60 120 180 240 300 360 420 480 540 600 720 780 840 900 955 |
| <210> 925 <211> 1164 <212> DNA | | | | |

<213> Homo sapiens

| 400 005 | | | | | | |
|--------------------------|------------|--------------|--------------|--------------|-------------|------------|
| <400> 925 ggcacgagca | + | ataggtggtt | ctgagggttt | ctataactac | acttggggac | 60 |
| ggcacgagca ccttgtggac | catgegeeeg | acayyccccc | cccctaactt | tcacactaaa | ggaaagatcc | 120 |
| ccttgtggac | tacatttta | cttctttctt | ctacctccc | acctcagctt | gtaaggggg | 180 |
| tgggtgatge | etatagaaa | aggagatata | aggtacatat | gtccatgggg | ggaggggtt | 240 |
| atgtgtgtat | gtctggggag | aggaggtgta | cartarrac | ttctgtcccc | ctatccccac | 300 |
| gtgtgtgcag | teattgteee | aaggugutuu | ctacatttaa | tgcacacagg | atcctgcccg | 360 |
| cctggtcccc | actitgegee | anagagatt | agaggatta | caaggaggca | ggactgaaac | 420 |
| cccccttgc | cagagecaga | gaagggggtt | tacctaaatc | accetetaag | coctttaacc | 480 |
| ccttaccagg | gttactcccc | aacacccccc | ttaataaaaa | gggtccaggg | teceettae | 540 |
| acgggcagct | geetgtteee | ttttattt | ccatctatac | ctgttccttc | cacagcccag | 600 |
| tggtacctcc | ctcaccctct | theagette | gagagagat | agtcaacacc | cctactatct | 660 |
| gcacacagaa | gcccaccttc | tteeecttag | gaggagggac | ctattactac | aggatggaca | 720 |
| ctctgtcact | cacacactga | cccacggggc | ataaatagag | ctgttcctgc | caddccadcc | 780 |
| ggacccagcg | ccctcttctc | cccacaggct | graaaragac | ttccaatcac | ctaccacata | 840 |
| cccacacacc | ctcactcatt | ccagggaagc | ccaggraggr | ggtgaacccg | ccctccctcc | 900 |
| tatcagtcct | cttgttttat | gcaaagattt | actgtaaagt | agatttcttt | gaatttataa | 960 |
| gccattcttt | tattgtaaat | attgtctcta | aatgtgtaac | atattataaa | gaacctacaa | 1020 |
| ggatttttaa | agatgttttg | ctcatttaca | aaagtgttgt | aacagtgttg | gacaaagccc | 1080 |
| tccaccccat | gtccgcatgg | ctcctttcac | tgtgtccttg | acacacctct | ctggcaacaa | 1140 |
| | | | cttaaaagta | cagtctatat | cttggaaata | 1164 |
| aatagctttc | ctcaaaaaaa | aaaa | | | | 1104 |
| | | | | | | |
| <210> 926 | | | | | | |
| <211> 1929 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 926 | | | | | | 60 |
| tcgagttttt | tttttttt | tttttttt | ttagatgttg | tctgtattta | - agatastas | 120 |
| ttatgaaaca | agaacctgct | aacaggtaaa | tcgtaaagta | acatatttt | geeetgatge | 180 |
| cattagtcac | aatgccatgg | ggtaactgct | atgtgatttc | ccatttgcaa | ggaagcatat | |
| taattcagtt | tctgctcaat | atacaattag | gttgtaggga | tatagatatc | tcatttgagt | 240 |
| tatctgagtt | tttcatcttt | atatctaaaa | atctaatctg | aaaatagtaa | aacacattta | 300 |
| aaaccttaga | tgctactgta | gtaaaagtta | tgtttataaa | catttcagta | tattccttca | 360 420 |
| acttcaagaa | tcttgaattt | ccttgctaga | aggctttttt | cctcaaagat | tcctttagg | 480 |
| cttactttgg | tgttcaggat | ctccaattat | aaatgtagtc | tctcagcacc | acattccgta | |
| aagatgattt | cccaagtaac | ggtatttgac | taagttgctc | cagagtgtta | gggtgcaaac | 540 |
| cacagttagt | aagctcctta | tgaacaacct | ccatatcaag | tactttgtcc | atttgcaggc | 600 |
| agatgttaaa | tacagcagtt | ggctcgtgtg | gatacagtac | tgcagagaaa | gatccactct | 660 |
| gtgaagattt | gagcagcatg | gtcagtgaat | gcagagaatg | aggcatgata | ggacctgtaa | 720 |
| tctccaaact | aaattggtct | ctgtatccag | aaagagcttg | tgtcttcaca | ttcacactcc | 780 |
| gtgccttaag | catttgcatt | gtggcacctc | ggaaagcaac | aggggacaag | agggttggag | 840 |
| gaagtcctgc | ctgtggacct | gaggtagcaa | ctaaactctt | agagttaatc | aaaaaattga | 900 |
| gcaatgtaaa | ggtgttgatt | ccttttacca | acacaacaga | ttcaggtctg | tgatccattt | 960 |
| gtacttcatg | tttctcttta | cgcagcttga | tagaaagtat | gtctggcttt | ttaattttat | 1020 |
| cttgcacacc | catctcttcc | agccaggaaa | . aactttcctc | ttcatcytca | tcactgatgg | 1080 |
| cttactccct | aggaaattgc | tacagttaga | gtccctattt | cacaagctgt | tcctgtgcaa | 1140 |
| atctatttca | tgagtccata | agtcagtgga | tgatataaag | ttattttaat | cacatactcc | 1200 |
| ccatatccca | agcttgttcc | agatgctgtc | : tccttcttat | ggccactttc | ttttattaaa | 1260 |
| ggcagagaa | attcaatacc | tatatgagga | acaaaaatgt | aactgagttg | tcatttaaag | 1320 |
| tatttaacag | gcatgctgta | cttttagagt | : gtaaaaaatt | tgaaatgtta | gtttttacaa | 1380 |
| atgatctatt | aaggcagtag | agttttcaag | r ctttcttcac | : aaacctacaa | acatgcataa | 1440 |
| aacgtattct | ccttgaaaga | ggttcgggaa | acaacacata | catgtaacac | tctttcataa | 1500 |
| atcatattqt | attccagttc | : actttttgaa | ı aaagtactga | ttgggcccat | taagtagatt | 1560 |
| tcatgatcca | ctaatgggtt | tactcagttt | : gaaaattttg | r ttattaaagg | ggtaattggt | 1620 |
| actatagaag | aatttctaga | agagtatatt | cagatagtga | ctatctggcc | caatatgtgt | 1680 |
| tttattttag | agatcagaga | acactatgto | gaaggaacag | , tttaaatcag | gagtccccaa | 1740 |
| cccctagact | gtggactggt | actgacctat | ggcctgttag | aaaccgggct | gcacagcagg | 1800 |
| aggtgaggg | ctatcaaata | aacattacto | cctgagetee | atctcctgtc | acatcagtgg | 1860 |
| aggegagega | | | | - | | |

| | tcgcattaga gccgaattc | ttctcacagg | ggcacgaatc | ctactgtgaa | ctgtgcatgt | gaggcctcgt | 1920 1929 |
|---|-------------------------|--------------------------|------------|------------|--------------------------|--------------------------|--------------|
| | <210> 927 | | | | | | |
| | <211> 1444 | | | | | | |
| * | <212> DNA <213> Homo | sapiens | | | | | |
| | | - | | | | | |
| | <400> 927 | tttttttat | aggtaaggaa | ttcttttctt | taaattaaqt | agaaaactac | 60 |
| | gtggactaca | gctctaggga | gctcatccag | gtctctgtga | tgtcttcgat | ttcgtttctt | 120 |
| | cttcatttcc | tgcatgtgct | tccactttgg | gcccccttg | tttctctgtc | tccgcttctc | 180 |
| | cctgtgccac | atctgttcgc tgtatctcaa | agtactggtc | gaggctgaag | tttgggctgc | cccctcctca | 240 300 |
| | tactctaccc | tctgggtatt | ttccatctqt | tcattctcaa | tgacattcaa | agtcagcttc | 360 |
| | actatogtot | ggatgaaagt | gtgctcctgg | gctttgcagt | aatacatccc | agaatccttc | 420 |
| | ttctgcaaac | ttcgaatcag | tagcccatat | tccgttttga | tgatctttca | tcggggcttc | 480 |
| | aactcctctc | gatgctcatc acattccaga | ccctgacctc | tggatatacc | atttaatagt | cctttcatca | 540 600 |
| | gattaggtat | gactaatgct | gttcttggat | gtccccagca | ctgggtgatt | gggtccccat | 660 |
| | atttaacatc | ttggcgtcta | gctctccttt | tagaagtagg | agcatatcga | gagcatgcat | 720 |
| | ttccatccca | ggcacagtag | ggtctctggc | aagacaacag | tctgcgcaag | ctttcccata | 780 |
| | agtgtcgcat | ctgtgcaagg agagacaatt | agagetgaae | caatccatct | cgggaaccaa | atatctocaa | 840 900 |
| | ctcctccage | actacctctt | ccatattcca | cttttccttt | gaaatgctga | caactttgag | 960 |
| | gacagttcca | atgtctgttc | caagaaacat | tacatcgtac | tggccatctt | ctgcaatgac | 1020 |
| | atgatccacc | actatctgtg | tcagtctgta | atccacattg | attctcttga | acgttggtcc | 1080 |
| | tcctgcaact | gggtatacgg aaatctcggg | acttatacat | cacagagtgc | cgctttatga | ttggacatgt | 1140 1200 |
| | accadaccat | ggataaggaa | ttctcccatc | atactgcacc | caacgatggt | ctgcactttc | 1260 |
| | cttatgagca | tatggaccat | taaaaactgc | tctgatgtca | gccatgctat | acacacaaac | 1320 |
| | agcagagcct | ttgaagatgg | agctggttgt | agtaaagact | ccatatacta | caggatttct | 1380 |
| | | gtggggagta | aataaatatc | ttgaagctca | tcaaagtaag | tatctgctcg | 1440 1444 |
| | tgcc | | | | | | |
| | <210> 928 | | | | | | |
| | <211> 878 <212> DNA | | | | | | |
| | <213> Homo | sapiens | | | | | |
| | <400> 928 | | | | | | |
| | gaaggctgaa | acgtgcatgt | atataccagc | ctctctgggc | acactctctc | tgcatggtag | 60 |
| | ccagagcagg | ttctggctgc | tcttcaggct | aatcgtctgg | cacctggact | ctggccacaa | 120 |
| | catcctctga | tgtgcagaat | ccacttgaac | atctgcaaaa | actttacqaa | ggaggagttg ttggccacat | 180 240 |
| | gataggttga | ggtgagccga | ggacacaaac | cttacacagg | taggcagcac | taagctaaaa | 300 |
| | tggattaaaa | ataactaact | caagcatgtc | aaccaattag | taaatagaag | aattgtcagt | 360 |
| | aaagcgtatt | gaaagaatat | catctaggat | agcatttgat | ttcaggctgg | atgaaaaaat | 420 480 |
| | aatcttcgaa | ttttagagaa | ttagaggaag | ttgaggggat | ratgatgaaa qtqccaqqac | tattcatgat ccttgctatg | 540 |
| | cattacctcc | gattetttt | gttttgttt | gtttttgttt | ttgtttttgt | tttgagatgg | 600 |
| | agtctcagta | ctttggaagg | ctgatgcagg | cacatcactt | gaggtcagga | gttcgagatc | 660 |
| | agcctgacca | acgtggtgaa | accccgtctc | tactaaaaat | acaaaaatta | gccaggcatg | 720 780 |
| | gtggtgtgtg | cctgtagccc | cagctactca | ggaggcttag | gcaggagaat cactttagcc | tgcttgaacc tgggcaacag | 780 840 |
| | agcaagactc | catctcaaaa | aaaaaaaaaa | aaaaaaaa | Jacobagee | 222200000 | 878 |
| | <210> 929 | | | | | | |
| | <211> 793 | | | | | | |
| | <212> DNA | | | | | | |
| | <213> Homo | sapiens | | | | | |

| <400> 929 | | | | | | C 0 |
|---------------------------------|-------------|-------------|------------|--------------|------------|------------|
| cggcacgagg acc | ctgtccag (| cagcattctg | gcccagagcc | gtgagcgtgt | cgccagcgcc | 60 120 |
| cgcgaggccc tgg | gaccacat q | ggtggaatat | gtggcccaga | acacacctgt | cacgiggete | 180 |
| gtgggaccct ttg | gcccctgg a | aatcactgag | aaagccccgg | aggagaagaa | gragggggag | 240 |
| aggagaggac tca | agcgggcc (| ccgtctctat | aatgcagctg | stattatata | atatagaatt | 300 |
| ggggctcatt tca | aaacttat | tttctagcca | ccccccag | gastatatas | gastatata | 360 |
| gggaagctaa gg | ctctcaaa a | acgggcatca | cccagilgac | gtagagaga | atatacaaa | 420 |
| gcttggaaga ag | cetgitet (| thatagata | gagaatttt | tttccttctt | aaatatcagg | 480 |
| aaaaatatct tte aatatagccc gg | caggaaag | actorececty | cagaaccccc | cactttqqqa | aactaccagg | 540 |
| ggcggaacac ct | gracegora (| geteacacet | ccanceann | caecatagta | aaaccccqtc | 600 |
| tctactaaaa at | gaggicag (| asatasacca | agcatagtag | cadductateta | ttatcccagt | 660 |
| taggaggetg ag | acaaaaaa | atctcttgaa | cctgagagg | ggaggttgca | gtgagccaag | 720 |
| atcgcgccat tg | cactccac | cctagagaac | aagagtgaga | cttagtctca | aaaaaaaaaa | 780 |
| aaaaaaaaaaa aa | | cccgggggac | | | | 793 |
| aaaaaaaaaa aa | a | | | | | |
| <210> 930 | | | | | | |
| <211> 1441 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo sa | piens | | | | | |
| 1225 1101110 201 | P | | | | | |
| <400> 930 | | | | | | |
| ggcacgagct tc | agaaaatt | aatcacatac | aatgtatgtg | tcctcttttg | accttggaaa | 60 |
| tctgtatgtg gt | ggagaagt | atttgaatgc | atttaggctt | aatttcttcg | ccttccacat | 120 |
| gttaacagta ga | gctctatg | cactccggct | gcaattgtat | ggctttctct | aacccctgca | 180 |
| gtcacttcca ga | tgcctgtg | cttacagcat | tgtggaatca | tgttggaagc | tccacatgtc | 240 |
| catggaagtt tg | tgatgtac | ggccgaccct | acaggcagtt | aacatgcatg | ggctggtttg | 300 |
| tttcttgggg tt | ttctgtta | gtttgtcttg | ttttgctttc | cagagatctt | gctcatacca | 360 |
| aggaatcacg ca | accactaa | agctatccag | ttaagtgcag | gtagttcccc | tggaggaaat | 420 |
| aatattttca aa | ctgtcgtt | ggtgtgatac | tttggctcaa | aggatctttg | cttttccatt | 480 |
| taagcttctg tt | tgagtttt | gccctggggc | ttgaatgaat | cccagagagt | cgttcggatg | 540 |
| gtgggaggct gc | ctaggagg | cagtaaatcc | agtcacagtg | cctgggaggg | gcccatcctt | 600 |
| ccaaaatgta aa | tccagtcg | cggtgtgacc | gagctggcta | acaggcttgt | ctgcctggtt | 660 |
| ttcctcctac ac | gtggacat | tattctcctg | atcctcctac | ctggtccacc | ccagggctac | 720 |
| cggaaggtaa aa | tcttcacc | tgaaccaatt | atgagcagtc | tccttactga | aggtacagcc | 780 |
| ggatacgtgg tg | ccccggg | gctggtgttg | gcagccgggg | ggaggtgcct | gagggtcccc | 840 |
| acggttcctt to | tgcttttc | tgaatgcatc | aagggtacga | gaacttgcca | atgggaaatt | 900 |
| catccgagtg go | aatggcag | agaaggatag | gagtggaatg | cccacacagt | gaccaacaga | 960 |
| actggtctgc gt | gcataacc | agctgccacc | ctcaggcctg | ggccccagag | ctcagggcac | 1020 |
| ccagttctta ag | gaaccatt | tggaggacag | tctgagagca | ggaacttcaa | gctgtgattc | 1080 |
| tatctcggct ca | gacttttg | gttggaaaaa | gatcttcatg | gccccaaatc | ccctgagaca | 1140 |
| tgccttgtag aa | atgattttg | tgatgttgtg | atgcttgtgg | agcatcgcgt | aaggcttctt | 1200 |
| gcttatttaa ac | ctgtgcaag | gtaaaaatca | agcctttgga | gccacagaac | cagctcaagt | 1260 |
| acatgccaat gt | tgtttaag | aaacagttat | gatcctaaac | tttttggata | atcttttata | 1320 |
| tttctgacct tt | gaatttaa | tcattgttct | tagattaaaa | taaaatatgc | tattgaaact | 1380 |
| aaaaaaaaaa aa | aaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | 1440 |
| a | | | | | | 1441 |
| | | | | | | |
| <210> 931 | | | | | | |
| <211> 626 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo sa | apiens | | | | | |
| | | | | | | |
| <400> 931 | | | | +~~+~+ | assactac. | 60 |
| ggcacgagtt co | cttccccac | cagggaggac | aacatcttca | tacttacatt | gaagcaccca | 120 |
| ttcagaacac ga | aggcaatat | tgtagtccac | agggaatgga | getteactt | gateteeyya | 180 |
| ccttggctgc ag | gaggccatc | yeagettttg | aaaaytgaag | gygttaattC | tactttacas | 240 |
| ctttgcttat ag | Jeatttte | tectaacctat | aacaayyaga | tagatagasa | acceleagaa | 300 |
| catgagaata go | agttttgc | ccatgactta | tanagagaga | caaaacac++ | cttaatatta | 360 |
| aaaacagtgc co | Juaaatyya | aaaaayataC | ccacacayaa | caaaacaytt | cccggccccg | 300 |
| | | | | | | |

| ++a++aa+a+ | tatassact | tgcctgatgc | tetttetaaa | gtcaaaatat | gaatgctaag | 420 |
|------------|--------------|--------------|--------------|--------------|------------|------|
| ttettggtet | ctocatact | ctctgatttc | ttcagcaggg | tcaaaagaca | gttactagca | 480 |
| aaggcataac | ctacatectt | tggagaaaga | atttatata | tatataataa | cattattata | 540 |
| atggggaatg | cttgtcactg | Lggagaaaga | gttttgtata | tacacaacaa | cacataaaaa | 600 |
| | | atagttttt | gittictacc | tycacyacaa | Cacacaaaaa | 626 |
| aaaaaaaaaa | aaaaaaaaa | aaaaaa | | | | 020 |
| | | | | | | |
| <210> 932 | | | | | | |
| <211> 518 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 932 | | | | | | |
| ggcacgagca | acaatggcac | cccagtcgtg | gccaccacat | actcggtttc | tgctcagagc | 60 |
| tcgatgtcaa | gcagacagat | gactgaagac | ttcctgtaag | agaaatggaa | attggaaact | 120 |
| agactgaagt | gcaaatcttc | cctctcaccc | tggctctttc | cacttctcac | aggcctcctc | 180 |
| tttcaaataa | agcatagtag | gcagcaaaga | aagggtgtat | tgataatgtt | gctgtttggt | 240 |
| attaaataat | gggactttt | cttctgtttt | tattgagggt | ggggttggg | tgtgtaattt | 300 |
| gttaagtgat | ttatacataa | tctgtccctc | cctcttccca | ccctgcagt | cctctgaaga | 360 |
| gcaagcaccc | ccgtgcatga | gccttggatt | ctgaagtgtt | cctatttatc | ttatcctqqc | 420 |
| gaggeeaaca | gcccccccc | gatttttaat | ++++++++ | tattaaaaga | taccagtatg | 480 |
| cctggccaga | cgttttctt | gatttttaat | 2222222 | caccaaaaga | caccagoacg | 518 |
| agatgaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaa | | | 0.0 |
| 040 033 | | | | | | |
| <210> 933 | | | | | | |
| <211> 1830 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapıens | | | | | |
| | | | | | | |
| <400> 933 | | | | | | 60 |
| ggcacgaggt | cacccagact | ggagtgcagt | ggcgcgatct | tggctcacag | caaceteegt | |
| agattctcaa | tccaaagtcc | taaccaccca | gatatgatac | aaaacatttt | gttettaagt | 120 |
| gcatttttct | ggggagaggg | tcctatcatc | cccacccttc | cgcacacagt | taagagetge | 180 |
| cctctatggg | agccaggctc | tttcccacag | aatgtcagca | ggagcttgga | agatgatccg | 240 |
| agctccaccc | cacatgcctg | ctctatggga | cagtgcccac | agctgccagc | cttccccctt | 300 |
| accatggagc | caggcacacc | aggcaagcca | ggggctcccc | gaaggccccg | gagctccagg | 360 |
| ataacctctc | tctcctgcag | ggcccggtgg | cccaacaggc | cccatggaac | cactcttgcc | 420 |
| aggtccacca | ggcatgccgg | ctctcccctt | ctctcctgcc | tggcccttct | gtcctgcagc | 480 |
| tcctggatca | ccctacaaag | atagatactt | agtgctgtca | aatttacatc | atgatgtctc | 540 |
| accaatctqq | tcttttctct | ccaccctccc | accaagcccc | cagcgtctcc | ctctagactg | 600 |
| taaccacago | atcctgacag | gtcactccac | ctcactgccc | cagaatggtc | cttctagaag | 660 |
| acagttctcc | tagtattact | ccctgcttag | aaattctgat | ggctcccaaa | tgtcctcagg | 720 |
| ataaagcact | cattegttgg | ccgggcatgc | aaggccattc | attatgtggt | cctgatcgtt | 780 |
| ccttcctcac | cctcctctcc | ccaccctctg | cctcccacca | gacctcactg | gtgatgattc | 840 |
| tctcattctc | ccatattatt | atggtcctga | atocccttcc | cctcatctct | ctctatccag | 900 |
| tacacacata | ctgagctaag | tgttcctgtt | ctctccgcag | cctctccgac | tccccaggct | 960 |
| ggattaggto | ctgagecaag | tcatcccaca | gcgctatgtc | tcatqtcttc | tggaaaactt | 1020 |
| gggccgggcg | agtataaata | tgactggtct | attotoacca | cctattqttc | agggacctct | 1080 |
| gccaacccc | . agcgtaagcg | addeeggeee | atotogogogod | gaggaaggga | gtgctcggga | 1140 |
| gtttacctga | gyccaygaca | agggceegga | atgegageag | aaatdaactd | gagatttcct | 1200 |
| aatggaaaca | atgaatgaat | . caattaytta | . accaytyayt | cadacadetat | cctactccaa | 1260 |
| tcccccaac | : cacagetaat | . gaccccatgt | gayaaatttt | ctcctctctc | cctgctccaa | 1320 |
| gttctgcatt | . tttgccccct | . geceaetgge | tenedigigi | atatassaca | tggctaaagc | 1380 |
| cgtaacttgo | agctgggctt | . catccactcg | Lyagettete | . ctctcaagcc | cagccagtgc | 1440 |
| ccactcacct | tgggaccagg | g aggtccatag | aatccctgct | . cccaggggg | tccctagagg | 1500 |
| aaagcaaaag | , tcagaggtga | agtccgggca | gcatctctga | ggctccctgg | ggaggcaggt | |
| gcagtgaaga | a ggccccttcc | : acagcctgag | gcccccaggt | . gtgtccagcc | cggctctgtg | 1560 |
| tgagaaagga | a gcgcagccto | cctgcccago | : tggaagggaa | aataatgtcc | tctggggcat | 1620 |
| ggccttgttt | : aagcatgttg | gctgggcccc | : catcacagat | gaagagaggc | gagaagtcag | 1680 |
| aatgagaggg | g ccagtctgtg | gcatactggg | gggccctgga | ı aagactggta | cccaggagat | 1740 |
| gtttgtttgg | g aatttattat | tatcattatt | attgttgttg | r ttgttgtttc | tttttgacca | 1800 |
| | | a aaaaaaaaa | | | | 1830 |
| | | | | | | |

<210> 934

```
<211> 1022
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (476)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1010)
<223> n equals a,t,g, or c
<400> 934
gattgtaaga ttgtgaagat atataaaatt gatgaattaa gagaaattat gccactttcc
                                                                       60
tatagtttct gtgttctgtt tattgtatgg tgtattcact cttggaaaat atgtaatagt
                                                                       120
tgtgtatcca gaatatgtgt cttcacctga atatttaatc tttatattta caaaaaaata
                                                                       180
agttccacaa gatggacaaa aatggtccat gatatttagc ttaaattgta accttttgtt
                                                                       240
gtgtatataa aacttccttg gaagaaaata accttattgt tttcttaaag ctaaacagaa
                                                                       300
taggattggt actcattaat tatgtcttgc aaatattttc taaaaattca accactctcc
                                                                       360
                                                                       420
taaaatggtg tttaaatatt ttgtagggca gaatatgcat attgcctgtt agcaagtaat
aattcattct catagagaaa tgggttttta cccatggaag taatcttttt tttttntttt
                                                                       480
twtttttatt ttttttat tattatactt taagttttag ggtacatgtg cacawtgtgc
                                                                       540
aggttagtta catatgtata catgtgccat gctggtgygc tgcacccayt aactcgtcat
                                                                       600
ytagcattag gtatatctcc yaatgctatc cctccccct cccccaccc cacaacagtc
                                                                       660
cccagagtgt gatrttcccc ttcctgtgtc catgtgwtct cattgttcaa ttcccaccta
                                                                       720
tgagtgagaa yatgcggtgt ttggtttttt gtycttgcga tagtttrctg agaatgatgr
                                                                       780
tttccarytt catccatgtc cctacaaagg acatgaactc atcattttt atggctgcat
                                                                       840
agtattccat ggtgtatatg tgccacattt tcttaatcca gtctatcatt gttggacatt
                                                                       900
tgggttggtt ccaagtcttt gctattgtga atartgccrc aataaacata cgtgtgcatg
                                                                       960
tgtctttawa aaaaaaaaa aaaaacccgg gggggggccc gtaccattgn cttagggggg
                                                                      1020
                                                                      1022
gg
<210> 935
<211> 1077
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (476)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (490)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1036)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1040)
<223> n equals a,t,g, or c
<220>
<221> SITE
```

```
<222> (1052)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1062)
<223> n equals a,t,g, or c
<400> 935
                                                                      60
gattgtaaga ttgtgaagat atataaaatt gatgaattaa gagaaattat gccactttcc
tatagtttct gtgttctgtt tattgtatgg tgtattcact cttggaaaat atgtaatagt
                                                                     120
tgtgtatcca gaatatgtgt cttcacctga atatttaatc tttatattta caaaaaaata
                                                                     180
agttccacaa gatggacaaa aatggtccat gatatttagc ttaaattgta accttttgtt
                                                                     240
                                                                     300
gtgtatataa aacttccttg gaagaaaata accttattgt tttcttaaag ctaaacagaa
                                                                     360
taggattggt actcattaat tatgtcttgc aaatattttc taaaaattca accactctcc
                                                                     420
taaaatggtg tttaaatatt ttgtagggca gaatatgcat attgcctgtt agcaagtaat
                                                                     480
aattcattct catagagaaa tgggttttta cccatggaag taatcttttt ttttntttt
                                                                     540
ttttttttan ttttttttt wttattatac tttaagtttt agggtacatg tgcacawtgt
                                                                     600
gcaggttagt tacatatgta tacatgtgcc atgctggtgy gctgcaccca ytaactcgtc
                                                                     660
atytagcatt aggtatatct ccyaatgcta tccctccccc ctcccccac cccacaacag
                                                                     720
tccccagagt gtgatrttcc ccttcctgtg tccatgtgwt ctcattgttc aattcccacc
                                                                     780
tatgagtgag aayatgcggt gtttggtttt ttgtycttgc gatagtttrc tgagaatgat
                                                                     840
grtttccary ttcatccatg tccctacaaa ggacatgaac tcatcatttt ttatggctgc
                                                                     900
atagtattcc atggtgtata tgtgccacat tttcttaatc cagtctatca ttgttggaca
                                                                     960
tttgggttgg ttccaagtct ttgctattgt gaatartgcc rcaataaaca tacgtgtgca
tgtgtcttta waaaaaaaa aaaaaaaaaa aaaaaactcg agggggggcc ccgggacccc
                                                                    1020
aatttcgcct ataggngagn cctattacaa tncactggcc gncgttttac aacgccg
                                                                    1077
<210> 936
<211> 1077
<212> DNA
<213> Homo sapiens
<400> 936
caacaatggg cccacgacca agaccctggg tgttcagacc ccaaggccag ggctttcccg
                                                                      60
ctgcatcaag atgccaatcc ctttgtgggc ttcaccagtg cccaagtctc tatggagaat
                                                                     120
                                                                     180
gagaactgga agccactgct accgtctacc cagcaccagt agtgccgatg tgccacactg
                                                                     240
cccagttgag gcccctcacg ctctgtgccc ctagatcctt caggtcccca ccctcagctg
tcaccaccac cctcccagg ggactccatc tgagatgagg cctcgtcctc ctggaagctg
                                                                     300
                                                                     360
aggctgagaa gggtggagct tggccctggg gaaggcagac cagggtctga tggcttctag
ggatgctctg cgtgtgtctc agcaccgcta tctcagccac tttcagcctt atgcacgtag
                                                                     420
aatgaccaca gccactcgca tccgtatagc actttaaagt ttctgcagtc ctttgacaca
                                                                     480
taggatetea tggageetea egtetaetee ettetgeaga tgaggaaace gagagaagtg
                                                                     540
                                                                     600
gcccaaggtc acgcaactct gagatgccac atttcatttg atcttgtaca cattttcttt
tattccttct tttttcctcc tttcatttcc cactacgcac aaagagttta taaacactgt
                                                                     660
                                                                     720
tctcagaaga gtcacagttt ggggtgagat ctggaaatca agaaatgggt gtccactctt
ttctttcatt agctaggatc tactagatgc attatactcc atacctgctt ttcccatggc
                                                                     780
                                                                     840
cgccctacgg aaaatcccat ccacagaggc cagggctacc caagcccctc caggtgagct
                                                                     900
gggcctttcc tttatgaacc tccatcctcc cagccagcta cagtagggcc tcctcacccc
gtaccccaca gctagacagt gtcagcactc atctcctcct cccacatttc tggagctttt
                                                                     960
                                                                    1020
ttttttcctt ccccattgac ctttgtggtc ttctgtgatt atttatgctg cctcccaagg
                                                                    1077
<210> 937
<211> 1309
<212> DNA
<213> Homo sapiens
<400> 937
                                                                      60
ggcacgagag gtcgtaaggc actgggcaaa aacttttcca agaaagttca tggtgcacac
                                                                     120
gctgacctaa acactggccg acattcccaa ggtttttttc attatggaag tgcatggcca
```

```
ttgcatggta tccagaaaac aaagaccaga gaagccagac tttataccac catctggaaa
                                                                     180
                                                                     240
catttaattt gtgctttagg taagtgttag caaatattta ggatgattga tcaaatcatt
                                                                     300
agtgtgttta tgagtgcatg gtgtaatttt tactaaagct cacatttctt caggaactcg
attcaactcc tttacattcc tggttatttt catttacttg atcttgaggt ctcatctggc
                                                                     360
agagctgtgc aagctgggac ctttgtggct cattttgagg agctgtttac tttacctgtt
                                                                     420
                                                                     480
gatgggaact tgcaggtggg aggcagccag tcttaaagag taccttgtta gcaagtgtgg
                                                                     540
aagagagtcc acgcagacag acttgcccta tgtggtgtcc cctctgccag cccagccctt
                                                                     600
gggcacattg gcacctacct gaacccgagc cccctcatgc acacagggag ccgcacctcc
                                                                     660
ctcacacgct cctcaccagt gtgacatggt gtgacgtgct ctgtgggtcc acaacgggcc
                                                                     720
cactccacag ctctgtgcac agcatgctgg gtcagggtgg tgctagatta ataagatgag
ggtgaatgtc aaaactgagc actttgagta ctgtgggcac actgtcacag ggtttaccca
                                                                     780
                                                                     840
ggaaggaaca acccctgggc tccagaagca ggttgaccag gccagtctga gttgtagcat
                                                                     900
tgagactcat ctagcggaag tcaatgagga aggaaaactg gctgagaaca gctgttgttt
                                                                     960
cagttaaaat ctcagaatga tgcattgaat tcaaagttac aacacagcaa aatagtatat
gtattttttt aaacctcaaa aatactgtat tattaacttt aaaacatttt tggctggtgt
                                                                    1020
                                                                    1080
ggtggctcac acctgtaatc ccagcacttt gggaggctga ggcaggcaga tcacgaggtc
                                                                    1140
aggagattga gatcatcctg gctaatgtgg taaaaccccg tctctactaa aaatacaaaa
                                                                    1200
aattagccag gtgtggtggt ggccgcctgt agtctcagct actcgggagg ctgaggcagg
                                                                    1260
agaatggcat gaacctggga ggcggagctt gcagtgagcc aagatggcgc cactgcactc
1309
<210> 938
<211> 910
<212> DNA
<213> Homo sapiens
<400> 938
ggcacgaggc tctgggcatg gtgctccctg tcatctgctg ggtagaggtg ctctgggcac
                                                                      60
agtgctccct gagtctgctg gacacaggtg ctctgggcac ggtgctccct gagtctgctg
                                                                     120
ggtagaggtg ctctgggcac ggtgctccct gcttctgctg ggtagcggtg ctctgggcac
                                                                     180
actgctacct gtatctgctg ggcacatgtg ctctggaaat ggtgctgcct gcatctgccg
                                                                     240
ggcacaggtg ctcctggcgc tgtgttgtgg gatatgtaca tccccagcca tttgctgtcc
                                                                     300
ttgggcaact tagcaatgtg cgatggtatt gttactttat tttttagaag ggacaagaaa
                                                                     360
cacagaggtg agacatagaa aaggaaaacg gatctattta aaccttctct tgtgccccca
                                                                     420
tgggaatgtc aggcactgca tctgcaggtg gcattggtgt ggactcctgt cgacacgcaa
                                                                     480
tgtactgtct gtccatcagc aggtctctct tgtgaattcc tcctaacccc gccttaagga
                                                                     540
taaaaacgat toototgtgg gaataatoat ottagtttgt ttaagotgat ataagaaaaa
                                                                     600
atccagcagt ccgggtgtgg tgctcacgcc tgtcatccca gcactttggg aggctgaggc
                                                                     660
aggtagatca cgaggtcagg agatcgagac catcctgacc aacatggtga agccccgtct
                                                                     720
                                                                     780
ctattaaaaa tacaaaatta gccaggcgtg gtggtggacg cctgtaatcc cagctactcg
ggaggctgag gcaggagagt cgcttgaacc cgggaggcgg aggttgtggt gagccaagat
                                                                     840
cacgccactg cactccagcc ggagtaacaa cagcaaaatt ccgtctcaaa aaaaaaaaa
                                                                     900
                                                                     910
aaaaaaaaa
<210> 939
<211> 2894
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (103)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2876)
<223> n equals a,t,g, or c
<400> 939
                                                                      60
atgctgatgt tcactgagtg tgtgctggac ctgacagcca tgaggggagg aaaccctgag
```

| ctgtgcacat | ctgctgtgtc | cttgtaccag | atccaggaga | gtntggtggt | ggaccagatc | 120 |
|------------------------|--------------------------|------------|------------|------------|-------------|-----------|
| | gcaaagactg | | | | | 180 |
| | ggcttctctg | | | | | 240 |
| | tgtgaaacaa | | | | | 300 |
| | gaaacttaca | | | | | 360 |
| | caacagtgtg | | | | | 420 |
| ttcaatctac | agccctggat | gagatgtttc | agcagaccga | agatattgtt | tatcgctatc | 480 |
| | ccttcttttg | | | | | 540 |
| | | | | | | 600 |
| | taaatataaa | | | | | 660 |
| | gtgagcagca | | | | | 720 |
| | tacagcttga | | | | | 780 |
| | caaagaacaa | | | | | |
| | aatctgcctt | | | | | 840 |
| | gtgtttggct | | | | | 900 |
| | acagttattc | | | | | 960 |
| | cagagcagtg | | | | | 1020 |
| tattcacccc | tcatccaggc | agtttgatat | ttggagtaag | tttgtttaaa | tctgagcatg | 1080 |
| catctttaaa | cagctcagga | agaaatagct | taagaagaag | tgaaacatgg | atcttggaag | 1140 |
| aaattttgaa | atcttcaatt | tgatcctaat | atggatacat | gttaatcttc | caaaatcttt | 1200 |
| catattgcac | taatttatta | aaacaactgt | gtattggatt | ttgtaattta | actaaggcac | 1260 |
| | tttaaaatat | | | | | 1320 |
| | agtgaacttt | | | | | 1380 |
| | ttacttcttt | | | | | 1440 |
| | atttttatt | | | | | 1500 |
| | taggtttatt | | | | | 1560 |
| | tgaatagggc | | | | | 1620 |
| | atgcagtgag | | | | | 1680 |
| | | | | | | 1740 |
| | ctaatgtgta caggcagtta | | | | | 1800 |
| | | | | | | 1860 |
| | ttttacttac | | | | | 1920 |
| | aatcctttta | | | | | |
| | aatctaattt | | | | | 1980 |
| | tgtaattttt | | | | | 2040 |
| | tatgacgttt | | | | | 2100 |
| | tgcattattc | | | | | 2160 |
| | ttgcctgtac | | | | | 2220 |
| tagggtgtag | ctgggtacat | attaagtggc | ttgttgagcc | aggtacttcc | ttagtgagtt | 2280 |
| | gccatgaata | | | | | 2340 |
| atgcaggctt | ccaggaacat | agactgtttt | acctccacaa | ccctatttgt | tattagtgat | 2400 |
| | atataatatt | | | | | 2460 |
| tcacctgtgt | tatctcagtt | gtaggtttat | tctatcctct | cctcttcctc | tcccatttct | 2520 |
| | aggatgaaac | | i | | | 2580 |
| taggcaagtg | gtcaagccat | gctttgtgac | tttcaagtta | attcttcttg | ttcttgtata | 2640 |
| | tggggtagat | | | | | 2700 |
| | attcatgaat | | | | | 2760 |
| | ttgagtatag | | | | | 2820 |
| ggcccggtac | ccaattcgcc | ctatagtgag | tcqtattaca | attcactggc | cgtcgnttta | 2880 |
| caacgtcgtg | | | <u> </u> | | • | 2894 |
| caacgoogog | | | | | | |
| <210> 940 | | | | | | |
| <211> 837 | | | | | | |
| <211> 837 <212> DNA | | | | | | |
| <212> DNA <213> Homo | canions | | | | | |
| <213> HOMO | saprens | | | | | |
| -400- 040 | | | | | | |
| <400> 940 | | | | | attata===== | 60 |
| | ctaacaccca | | | | | 60 120 |
| | actcttttca | | | | | 120 |
| - | gtgactaaac | | | | | 180 |
| | caggtttctc | | | | | 240 |
| | tccatggccc | | | | | 300 |
| gcagaggtgg | catcaggaac | aaatgggtca | taagaactta | ccttggcagc | agccccagaa | 360 |
| | | | | | | |

```
tggtcaggag gaaaggcact ttaaggtatc agaaggtaga aaggagaggt tggatgatag
                                                                420
aatggggaag ggattcctcc tcgtgttcac agaagtgaat caatgggaga cacaaggtta
                                                                480
                                                                540
ccacttaata ttcctgctct cctaggcatg ggtcaggtac atcttcagcc atgggtaagt
                                                                600
ttgttcaaca aatgagtgat ctttgggagg ctgaggcggg cggatcacga ggtcaggaga
                                                                660
ttgagaccat cctggctaac acgatgaaac cccgtctcta ctaaaaatac aaaaattagc
                                                                720
cgggtgtggt ggcgggcgcc tgtagtccca gctactcggg aggctggggc aggagaatgt
                                                                780
cgtgaacctg ggaggcagag cttgctgtaa gcagagatcg tgccactgca ctccagcctg
                                                                837
qqcgacagag cgagactgca tcccaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaa
<210> 941
<211> 1377
<212> DNA
<213> Homo sapiens
<400> 941
gcacgaggaa atcagaaaca agacaattat ttgcagtgct gtcaaacaag ccagaaggag
                                                                 60
aaaatcaagg tagaatgccc cactttccag ttgccttagg atagcaggct gcagcctcag
                                                                120
                                                                180
acttgatect gteattetee tetgteteee acatetgaat tgataattge tgeaaaatgt
                                                                240
cattagecta caetteatee ateagggete ttggattett acaecaegae ttgetgtgea
                                                                300
aggtgtttat tgcatcttca aagtgaaact ttaaattatt attcaaacat ttattttcct
                                                                360
tttgttttaa aaagagtccc tacaatgatc acttctaaga ttttttttta ccttcccctc
tgcagcacac acagctattc aacaatgatt tctaaaattc atatttcaaa tttgtatctc
                                                                420
                                                                480
tccattttga aacattatag aaagcatggg atgcttgaga caaatctggt ttctcctttg
                                                                540
aagtagctgt tgacaaccta ctctcttgaa aagttagata taattcttaa tcatgtttag
tggaaatttg tttacctgtc catctgtttt gctgtttcat tgtaaggaag atgagaagtg
                                                                600
                                                                660
ttggaacagc ttccctcccc taaaggtatt ctagcagagg cgagacagca acttggcggg
catgttgcat aggagttaag taccagatgg ggaattgccc atgtgatggt gaagagtctc
                                                                720
780
ttctcttctt tctcttctt tctgtcttcc tcttcctctt ctcttcctct cctcttcctc
                                                                840
tttctctctc ttccttttc tcttcctctt tctctttctc tttctcttc
                                                                900
960
                                                               1020
gtcttgctct gttgcccagg ctgcagtgca gtggtgtgat ctcggctcac tgcaacctcc
                                                               1080
                                                               1140
acctcccggg ttcaagcaat tctcttgcct cagcttctcc agttactggg actacaggtg
cataccacca tgcccggcta atttttgtat ttttagtaga ggcggggttt tgtcatgttg
                                                               1200
                                                               1260
gccaggctga tctcaaactc ctgacctcag gtgatccgcc tgcctcagcc ttccaaagtg
                                                               1320
ctgagattac aggcatgagc cgctgtaccc ggcctgattt tctatgattc tgcctttaaa
agacagcacg tataccaagc ctttttcaga aagcttttct cttaactcct tctaatg
                                                               1377
<210> 942
<211> 1319
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (65)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1298)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1302)
<223> n equals a,t,g, or c
<220>
<221> SITE
```

```
<222> (1305)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (1319)
 <223> n equals a,t,g, or c
 <400> 942
 tgccgaaggc ttgtggcctg accgtgtgtc cccctgcaga tgagcatccc actgctcctc
                                                                        60
 caggncaagg tggccctcgt ggagcgctat gtggccggct tcccggacct ccagaggagg
                                                                       120
 ctgctggtcc tcatggattc ctggtgccag cccggctttg acatcaagga cgttgccagg
                                                                       180
 tgagtcccgt ggggcgctgg cagctggcac cagatggcat cctgggagcc ctggttaggg
                                                                       240
 aagggagtgt aggggggcag caggcgcgtg ggagagctct ccccaggaag ttctggtgtt
                                                                       300
 tgggtcacag ctgccatgtg actgcagctg gagcagctgc ctctggagag gagcggctgg
                                                                       360
 ggctggcagg agcacagccc tcttctcccg agtgaaaaga gttaactgct cttagaagaa
                                                                       420
cgaaaataat tctccgtggt ggctcttctc atgcaggcat ggcaaccgta ctgctttctt
                                                                       480
 gttcatccat tcctttgttc tttcatctaa taaagttttt ggaagcactt ggtgtgtgac
                                                                       540
 gtctgtcagc aattacagag aaaaggcagc acctgacaag gagcccatat ggtgcctgta
                                                                       600
 tggattcagg gaagccatgt gcatgtgtgt gcatgtgtgt gcatgtatgt gtgtgcccat
                                                                       660
gtgcatgtgt gcctgcaggt gyscatgtgt gtgtctctgt gtgtgcacgt gatatgtgcg
                                                                       720
tgtgtgcacg tttgtgtgtg cctgtaggtg tgcatgtgtg tgcatgtatg tgtgtgcctg
                                                                       780
caggtgtgtg tgtgtgcatg tatatctgtg tgtgcattgt gttcgtttgt gcaggtgtgt
                                                                       840
atgtctgcgt gcatatgatg tgtacatgtg tgtgcctgca ggtgtacgtg tgttttcgtg
                                                                       900
catgtggtgt gtgtgtrcat gtatgtgtgt gcctgtaggt gtgtgtttgt atgtgtgtgt
                                                                       960
gcatgggtgt gtacgtgtgt gcatgtgtgc ctgtgcatgt gtgtgcgtgt ggtgtgta
                                                                      1020
catgtatgtg tgtgcacgtg tgtgtgcctg caggtgtgcg tgtgtgtgca tgtgtgtgcg
                                                                      1080
tgtgtacctg tgtgtgcact gtgttcatgt ttgtgcaggt ctgtgtgtgc atgcatgtgt
                                                                      1140
gtgtacgtgt gtgtgcctgc aggtgtgcat gtgtgtgtgt gtgagatatg agggatgaca
                                                                      1200
tctgggaggg gaggggcttc ctgctctata tctggtcaag gtgccccgag agtgaagcaa
                                                                      1260
gctgaaaggt ctgtgaaggc tccagggccc ggccactngc cnganaatcc cggcgagcn
                                                                      1319
<210> 943
<211> 2014
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (70)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1324)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1520)
<223> n equals a,t,g, or c
<400> 943
ggaacgtgag caggagattg accgctggag ggtgaagtgt gtgcaggagg tggaggagaa
                                                                       60
gaagcgggan aggaactcaa agcagccgct gatggcgtac tatctgaagt gaggaaaaaa
                                                                      120
caagcagata ccaaaagaat ggtggacatt ctacgggctt tggagaaatt gaggaaactg
                                                                      180
aggaaagagg ctgcagcgag gaaaggggtc tgtcctccag cctcagcaga tgagactttt
                                                                      240
acgcatcatc ttcagcgact gagaaaactc attaaaaagc gctctgaact gtatgaagct
                                                                      300
gaagagagag ccctcagagt tatgctagaa ggagaacaag aggaagagag gaaaagagaa
                                                                      360
ttagaaaaga aacaaagaaa agaaaaagag aaaattttac ttcagaaacg tgaaattgag
                                                                      420
tccaagttgt ttggggatcc agatgagttc ccacttgctc acctcttgga gcctttccga
                                                                      480
```

```
cagtattatc tccaagccga gcactccctg ccagcgctca tccagatcag gcatgattgg
                                                                       540
  gatcagtacc tggtgcatcc gatcatccca aaggcaactt cgttccccaa ggatgggtcc
                                                                       600
  ttcccccgct ccccagcaac gacatctggg caactgctgt taagctgcat tagtaaagat
                                                                       660
  gctccaggag tgtggtccag ccagcgctct ttccagctgt aaatattagc gatggtgcca
                                                                      720
  tettttgetg tagactaaac tgcaacttet aaatteeatg tggcatteec etaceetgaa
                                                                      780
  gttatgcttt ccttctgtgc tctgtgctgg ccagaggtgc ctcttgaatc agattaatgt
                                                                      840
  ggtttttcag gaaaggactt aggtgaactg aggtttttac cacaggcagt gaatgacctt
                                                                      900
 ggttcaccaa atttgcctct gttttgaggg gcttggtcca gagtgacttg ttaatttact
                                                                      960
 ctaacttcct tgtgtgttga tgggtaagta cactcaaaca ctgaatacag gtgtgtgatg
                                                                     1020
 ggtagatttc acagcccttc tactaatagt gagtgtgaag gcaagcttga tgcaaaacct
                                                                     1080
 cctgamcttt cctacctgaa gagccctttg acttctagga agaaaggtca aaaatgttat
                                                                     1140
 cttcagttgt gttaatccca gttttagtgc agcttaggag gctgctagtt aggaagatgg
                                                                     1200
 cagtggctgt aggctgggtt gccagaaaag atggtggcct agtcttatta ttcagatgga
                                                                     1260
 gaacttagaa aacctgaaga gtacccaaat tggattgtat tttaatggac aatggctgta
                                                                     1320
 tttnttccat gttagaagga tcctaatgaa agcacctgtt atttttaagt ttctaagggt
                                                                     1380
 ctagttgttc agaatcccca aggatatttc cctaacctca ctcagtcaca ttgtaggagc
                                                                     1440
 cagtgtagct atggaattat cttaggaact caagcttcta aaactatcca tgtagtcaaa
                                                                     1500
 tctaggggaa aaagcaaatn aaaatagtaa aatttggccg ggcacagtgc tcacgcctgt
                                                                     1560
 aatcccaaca ctttgggagg ccgaggggg ccgatcacga ggtcaggaga tcaaggccat
                                                                     1620
 cctggctaac acggtgaaac cctgtctcta ctaaaaatac aaaaaaatat tagctgggcg
                                                                     1680
 taggtggtgc acacctgtag tcccagctac tggggaggct gaggcaggag aatggtgtaa
                                                                     1740
 aacccaggag gcagagcttg cagtgagccg agatcgcgcc acggcactcc agcctgggag
                                                                     1800
 acagagcaag actccgtctc aaaaaaaaaa aaaagtaaaa tttattttt atattcatta
 ataaatgctg ttgtgcttgg agatgatcac tcatataaca tgtcattttt ttggttctgt
                                                                     1860
                                                                     1920
 tttggtttgg tttttgccaa ttattttgtt atatttccaa aaaactaaat aaaaatcatt
                                                                     1980
 tttattttt aaaaaaaaa aaaaaaaaa aaac
                                                                     2014
 <210> 944
 <211> 1200
 <212> DNA
 <213> Homo sapiens
 <400> 944
gatgaaatgt agcttattgt tttcagctag tttaaattgg tcttgagaca aatggaaatt
                                                                      60
tgtttcttaa ttacaggctc tagatgactt tatagaacat ctctgggcta ttatcaagta
                                                                     120
cttgcttaag aaggacaatt ccacttgaat tatatatttt ataccccaaa ggaaaataag
                                                                     180
tttaaattta attttaacca gatgatgcca tctgcatgga gtcactctgt tgtcgtgtcc
                                                                     240
acacgtccag gatatgttta atgaatggtg tttgtttact ttattggtct tagccaaatg
                                                                     300
agtaaagacc tggagactgg gcaatttgag aagacattta ggaatccctg gcttttctct
                                                                     360
gttgatgcca ccatataagc taaggatgac agtgggtagg gaatgtgtgt ggaattcctg
                                                                     420
tgtgattcac tgtaactgtg gtgtgctaaa tgcatggtta agctagygtm agcatcstct
                                                                     480
tcctgtaagt taaagatccc ttctgtgagc aggactcctg cgtactcatg tatattttga
                                                                     540
aatatgcttt acaggatatt ttaggactta ataaaagatg actgatgtgt aaggggactt
                                                                     600
aaaaggaaga aaaacccctt cttctgtagg gtagcatatt tgggattata attttcattt
                                                                     660
tetttaggtt ggttteatwt aactttttt ttttttttt tgagteaggg tegtgetetg
                                                                     720
togeceagge tgtagtgeat ggcacgatet eggeteatge aatteegeet eecaggagaa
                                                                     780
ttgcttgaac ccaggaggca gaggttgcag tgagccgaga tcatgccatt gcacccgac
                                                                     840
tctgggcaac agagccagac tctgtctcgg gggaaacaaa aaaaaagtgt gctttgtcaa
                                                                     900
gagaagcacc agcagacctc taagaactgc tctctaaggc tgcggtagca aattatctac
                                                                     960
tattgcaggt gccttattgg tagagggctc tgaagagcca aaactgtata tgcaacactt
gtaagataaa agggacttta ataatcaaga ttttcttgaa gatttgttag aaataatgtc
                                                                    1020
ttatttctgg taacctttcc ctttttgtat ttataactct actaaccaaa ttacctatca
                                                                    1080
                                                                    1140
1200
<210> 945
<211> 1295
<212> DNA
<213> Homo sapiens
<400> 945
tatgaattta tacactgagt cttgtcttgt gtcctctttt cctagcaaac aatatggcat
                                                                     60
```

| ctaaaaccca gttctactc | t gaataattt | · ttctttacaa | n datactacao | tatgatagag | 120 |
|-----------------------|------------------------------|--------------|--------------|------------|--------------|
| catgcccacc tggagagag | a ataaaaataa | taataataa | . gacgetatag | catgatatat | |
| ctccgttttg agcaaagaa | g cataaaggege | . cggcggcagg | acayaatttt | cateegeaat | 180 |
| tggtggtggg ggaacaggg | g caeggaggae a caacatcaca | . ggaagttatt | . gctgggaccc | cygaytagag | 240 |
| tcttcccagg aggcttttg | a aaccccadda | tastacetee | . algagiligg | gtteteatet | 300 |
| caataggcaa taacatgaa | a datttactca | accadactes | tagageeeeg | tatasaast | 360 |
| ctgtgctttt cttgtactg | a toggtgatgt | gccayyctca | . ryayaccago | cctgaggaag | 420 |
| aacccagaaa gtccagtca | a eeggegaege | tctcccccc | . aayyyatayt | aaacagatga | 480 |
| gagacagatg aggaaagat | a aagagcaccc c ctaaacaaa | cccgggawtg | aagriciagi | gaagactggg | 540 |
| tgcccgccca cgatggatg | a agtgggtgga | gccacccacc | ccayciligi | ciccatagee | 600 |
| ggcggctttg tttgttcgt | a agegegegga | cccaacagge | cassataata | ageceaeget | 660 |
| ctcttcccag cccacatcc | g aggeocoegg c tocaccoott | cctacccaaa | ggagggttgg | catglgagag | 720 |
| aactttgact ttctcagtg | a tatatataat | tagagaatta | geageeeee | gaaggggg | 780 |
| tgasagaggg aacccaaag | g cetactecat | ccctaatata | ggcastcaga | gaayggcyac | 840 900 |
| cacaaattct ccatgacat | g ctctcactta | racaartrac | ccaactttcc | tagtattata | 960 |
| tttcttcaac catcaaatg | a gaaaatcgag | ccadactcac | taggtgagag | ctgtcttgtg | |
| agcactttgg gaggctgag | a tagacagatc | acctgaggtc | aggageteacac | gagagagata | 1020 1080 |
| accaacatgg agaaacccc | a tototactaa | aaatacaaaa | ttagetggg | gaccageetg | |
| atgcctgtaa tcccagcta | c tegggagge | aaaacaaaaa | aatcocttoa | acatagaaa | 1140 1200 |
| cagaggttgc agtgagccg | a gatcacgcca | ttgtactcta | acctanatas | caacagtcaa | 1260 |
| actccatctc caaaaaaaa | a aaaaaaaaaa | cctca | gcccgggcga | caayaytyaa | 1295 |
| | | | | | 1273 |
| <210> 946 | | | | | |
| <211> 2163 | | | | | |
| <212> DNA | | | | | |
| <213> Homo sapiens | | | | | |
| <400> 946 | | | | | |
| ttttttttt tttttc | gaagtggtga | attttaatat | totataaaaa | atccaactto | 60 |
| ttccacaagt acatatgtc | tatgatttta | tgcatacatc | catatacata | tatcaaggta | 120 |
| aagtccaata caaaaaaac | a gcatttccta | tggccagtgt | tctacagaag | taagactgtg | 180 |
| caaactttat cgtatagtca | aatgagattg | cacactaagg | caggatgagg | cagaagcaag | 240 |
| ttgtgtccac agtatatta | aaaatacctt | gcatagctta | ttcattctca | cctaataaat | 300 |
| tcatcttaga attctgaag | g attttttcc | tagataaatt | tatacaagtt | agtgtatact | 360 |
| tettgtettt gttetgtgg | aaaccaggtt | tctcagtact | gattgtttta | cttcacaaca | 420 |
| ttattgattt aacaatagc | tgagctttgg | ggctctgcac | tgcgttcatt | gtaatccgtg | 480 |
| atacaatgac tacaaatgt | tcgcgatttc | taatcttcat | ctgtatctca | ggcgattttc | 540 |
| cagggcttcc attctctgtg | f tcatttcttc | taagcgctgt | gttaattttc | ttacttcttc | 600 |
| gtttgcaagg ttctggaaca | ı ttataaggtt | ttcacatttg | cattgatcgt | gtttttcttc | 660 |
| caaagggctt cctgaaggtt | ttgttgaatg | ggaaagcttt | tgtgtagacc | gtaaaagatt | 720 |
| gtcttcttca aacagatato | tgtgttgcac | tgttggctgt | tggaccattt | ttggcagttc | 780 |
| ccctgctgga gagtcctgtd | : ttccatcgga | gtcttctaga | gcttcacaga | tacctttctt | 840 |
| gagtttttca cttatctcat | ccattgtgct | gaagtcttcg | gcatagaaga | gatgcttgtt | 900 |
| tgtgggctca gaggcaatct | cttgtagttc | ctcctcaatg | gcttttccta | ccccaacagc | 960 |
| atacatagtg ataccattgg | ccttggcttt | actggcccac | tcggagacgt | catcctgage | 1020 |
| ccgtccgtcg gtgaacacaa | tggctgctct | gggcaccctt | gtggaaaggg | acctaaccc | 1080 |
| ttctccttgg gtaaaacttc | tctcaaacat | gtgtttcagg | gccagcccag | tcatagagcc | 1140 |
| ctttcccatg tatttcatgt | gggccacggc | ttttttcatg | tctttggctg | agttgaagtt | 1200 |
| tctcagagtg aactctgtgt | ggacctgtgt | ggaatactgg | agcagcccca | ctcgagcggc | 1260 |
| tttgggggaa attgtcaagg | aatctataat | tccagtgaca | aactgcttca | cgacctcaaa | 1320 |
| attctcttct ccaagactct | tggatccatc | gatcacaaag | accaggtcaa | ttgggccttc | 1380 |
| agtgcatttc ttgcaccgtc | ttccgtcctc | agctagaaca | aatccctctg | agcatttgca | 1440 |
| gatgtaggaa ttcccattat | taacacaaat | gtgttcgcag | ccatggtggg | ttgatttgca | 1500 |
| gacatccttc cttcggcagc | atttacata | ctcactcacc | caaaataaat | | 1560 |

gacatcette etteggeage gttteecate eteagtgage eggaateeet ecaageacte

gcacgtgtat gagtcgtcac tgttcacaca aatgtgttca cagccatggt ctatagcttg

gcagacatct ttccttctgc aggtttttcc atcttcacgg agtatataac cttcaaagca

ctggcacaca aacgaatctt cactgcttac acacgaatgt tcacaaccgt ggtcccccag

agcacaagag tccaattttg cacacgtctt cccatcgctg cggagcacgt gtccctcagg

acactgacag gcaaaggatc tgtccatgtt gacacaggag tattcacaac catggtcact

cagcaggcag taatccaccc gggagcaggt cttgaggtcc tcgttgatga ggaagccttc

tgagcactgg cagacgaagg aatcctccgt gttcagacac agctgctcac agccatggtc

1560

1620

1680

1740

1800

1860

1920

1980

| ctgctgtgca | cagtggtcca | ctcggctgca | ggttttgcca | ttggggtcca | gagtgtagcc | 2040 |
|-------------------------|--------------------|------------|------------|------------|------------|------|
| | cggcagtagt | | | | | 2100 |
| | gcacagtagt | | | | | 2160 |
| gcc | 3 ** * * 3 * * 3 * | 3 | 3 - 1 3 3 | | | 2163 |
| 3 | | | | | | |
| <210> 947 | | | | | | |
| <211> 1781 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | saniens | | | | | |
| \Z13> 1101110 | Saprens | | | | | |
| <400> 947 | | | | | | |
| | aggcgaaggc | ctgaggtttt | ccatcttcat | tetetttat | tattaggaga | 60 |
| | tgggccaatc | | | | | 120 |
| | tgggtcatct | | | | | 180 |
| | gctgactggg | | | | | 240 |
| | aaccccctc | | | | | 300 |
| | tctattgttt | | | | | 360 |
| | atcctcactc | | | | | 420 |
| | agtggttgtc | | | | | 480 |
| | agttgttcag | | | | | 540 |
| | gtcctcgcct | | | | | 600 |
| | ctgtgtgtgc | | | | | 660 |
| | ggcccagggc | | | | _ | 720 |
| | cccactccat | | | | | 780 |
| | gtaaccccat | | | | | 840 |
| | agttacttag | | | | | 900 |
| ttgctctcta | ggcctgtgtg | tgtgtgtgag | tgtgtgtgta | tatgggtgtg | ggtgtgtttg | 960 |
| | ttgtgggggg | | | | | 1020 |
| | acagatgctt | | | | | 1080 |
| tttgtcttgc | cccattgcct | ctccttcctt | gaactctttc | cttttcaatc | tcaactcatt | 1140 |
| cactgctgtt | gctcatttgc | ccttttccat | gtatttttc | ctacttagga | ttttccactc | 1200 |
| tatctttgtg | gttcatgagg | actttgcctc | ttctcctgcc | tcattccctg | actttctcta | 1260 |
| gttagatgtc | agtcctaaat | aggttttcct | cacttcaggc | ctcacccctc | accttgtttt | 1320 |
| tttgggggct | ccagggacca | atctggggct | ggaaatgtta | ggaggttgcc | ttggtgctgc | 1380 |
| cccagatctg | tccagcaggg | ggcagtaagt | gatcttggta | gtatccctgg | ctgctaagcc | 1440 |
| cttggcaggg | gtggtccttt | ctacattccc | attcacttaa | cagctctttt | gggattgggt | 1500 |
| gtttcattcc | atttctgccc | actccctctc | ctctcctctc | tggtaggttt | aattttatgc | 1560 |
| | tccagctttc | | | | | 1620 |
| | tatagtggta | | | | | 1680 |
| | tctctatcct | | | | tgaccctggt | 1740 |
| tggaaattaa | acttgtttta | tgcaaaaaaa | aaaaaaaaa | a | | 1781 |
| -210- 040 | | | | | | |
| <210> 948 | | | | | | |
| <211> 2151 <212> DNA | | | | | | |
| <212> DNA <213> Homo | canione | | | | | |
| VZ132 HOMO | saprens | | | | | |
| <400> 948 | | | | | | |
| | aaaacggaaa | acceteteta | aaaaaaaaaa | aaaaaaatc | accaccataa | 60 |
| | aatggcgaaa | | | | | 120 |
| | aacaggattg | | | | | 180 |
| • | acttcagcag | | _ | | | 240 |
| | tcttactctg | | | | | 300 |
| | tctggaaaaa | | | | | 360 |
| | ggcaaaaaaat | | | | | 420 |
| | agaggatgga | | | | | 480 |
| | tcctttaata | | | - | - | 540 |
| | tacagcatgt | | | | | 600 |
| | gatgggcata | | | | | 660 |
| | acaagctctc | | | | | 720 |
| | taggaatggt | | | | | 780 |
| <u> </u> | | | | | | |

```
gaagaggcac aagaatggct aaagcaattc atccaagggc caccggaagt aattagagct
                                                                     840
ttgaaaaaat ctgtttgttc aggcagagag ctatatttgg aggaagcatt acagaacgaa
                                                                     900
agagatettt taggaacagt ttggggtggg cetgcaaatt tagaggetat tgetaagaaa
                                                                     960
ggaaaattta ataaataatt ggtttttcgt gtggatgtac tccaagtaaa gctccagtga
                                                                    1020
ctaatatgta taaatgttaa atgatattaa atatgaacat cagaattact ttgaaggcta
                                                                    1080
ctattaatat gcagacttac ttttaatcat ttgaatatct gaactcattt acctcatttc
                                                                    1140
ttgccaatta ctcacttggg tatttactgc gtaatctgga acatttagct aaaatataca
                                                                    1200
cttttggctt aaaaattatt gctgtcaatt ccaataataa ttcttagctt ataaccaaaq
                                                                    1260
agcagtgttt aaaaggagag cttctataca aaacctattc ctggcgttac ttttcataca
                                                                    1320
atttttgttc tgttttacct ggaaataatt taccaaaata actgagtgtt gctgctaaag
                                                                    1380
aacaaaagtg gggaggtatc agggaacaag aaaacaagaa agggtatgat caatcatttt
                                                                    1440
cttctgctcc aaacagctgg agtaaaattc atgggaaatg gcccttcatt taaaaaaaga
                                                                    1500
tgtacctcac tacccactac aaatttggaa ctttgttctt ttcaataatt agttttctat
                                                                    1560
tgtaaattac ctactaaaca gtggtagcca tgacatggaa agtcaactga ttctacaatt
                                                                    1620
ggacattcat ttgtgtgccc tggaatttcc aactagtaat aaacaactac tgttgatgta
                                                                    1680
gttttaaacc acttgaaggg actcatgaag catcctgcaa cataaatttg catttttaca
                                                                    1740
tcagatttct ttttttcct gaaaaacaac taaccttcta acaactatct ttcaaaagta
                                                                    1800
aatgtaataa aaatgcacaa cataaaatgt ttatgatccc agcaatacac tttttaaaaa
                                                                    1860
atgtgaaagt caaagaatta agttctagtt ctgactcatc acaagaggtc aaaagtattt
                                                                    1920
gctactgtaa cattcaattc acatttgaga atcatggtaa aaataacttg tatttgcctt
                                                                    1980
accatcatga tcctactgtt gagttaggaa aatatggtta gacagactca cattactttt
                                                                    2040
tttcagaggt aaactctaga ttactgtgtc aacccaatac tatttggcca tagatgtaaa
                                                                    2100
2151
<210> 949
<211> 1829
<212> DNA
<213> Homo sapiens
<400> 949
cggcacgaga ttggagccta tttagtggat tttatgcagc caaagatgtt tcttgttgtt
                                                                      60
gttgttgttc ttgcttttaa ctaatttgcc tcccaggaga cagttgaaat gtctagagac
                                                                     120
attttgatta ttatgcctgg caggacgcca ctagtggcat ctagtggatg gagggtaagg
                                                                     180
gtgctgctaa gcgtcctccc atacacagga cagcaccccc çacaaagaat tatccaaccc
                                                                     240
caaatgtcag tagtgctgag gctgagaaac cccactctgc tctctaacca aaattagaca
                                                                     300
cagaaagtgg agacattcta ccaccctgac aacatcaatg gcttttgccc atttaaaaca
                                                                     360
agaaagagga atatgtatcc aacccaaaac aacatcttaa cattctttct aataggcttt
                                                                     420
tgcaaaaata gttcatattt tataactgtc ttgcagcatg gggtataagt gtaatcattg
                                                                     480
taaaaatgaa acctaatcat tgtaaaaatg aaacctaatc atggtaaaaa tgaaaagagt
                                                                     540
gcctcaaaac atctgaagtt cttagcaaaa ggcagcctgt cttcagtggg cacttttgga
                                                                     600
tggaggcagg actagggtat cagtaggagt gagaacaaag gtcagaaaaa tgagtacaca
                                                                     660
gcacatgtat actgattaat ttctttcttt tttccttctt ttgatggagc aagactgtaa
                                                                     720
cagaagcctg agagtgagga agggctttgg caactattac tgtagacaca gtagtttact
                                                                     780
caattttatg aactcttagt cctgggctgg aattcacgcc tctgctggaa ttgcacagac
                                                                     840
aaaacgtgct tgcgaggagt aaggtggcaa caaaagaaaa atgcaggcaa aaacacqcct
                                                                     900
cattttgaaa ccggatctga gcatcctaga gccagagcct ctcccagcca acattgctga
                                                                     960
gttgagcaga gtgacagact ccacactgga gccagccccg cagctggcca taaggaggag
                                                                    1020
ccacgagcag gtgctgggaa gacaggcttt tgaacgcaca ctatgctgat gtctctttct
                                                                    1080
gtgaagtttt ctacatgagt gacgttctca aagtctgcaa cacagtctgc catgagatgc
                                                                    1140
cttttttcct ctgggaacac aatgctactt tcgtgattgg ctgagtaatg gcccccaaag
                                                                    1200
atgtactctt catcctaatc cctggaacct gtaaacatgt taccttatat ggcaaaagag
                                                                    1260
acttegggea ggeacetgte ateceagata eteaggagge tgaggeaaaa gaategetea
                                                                    1320
aacctgggag gcggaggttg cagggagcca agattgtgcc aatgcactcc agcctgagca
                                                                    1380
```

1440

1500

1560

1620

1680

1740

1800

1829

acaaagtgag actctgtctc taaaaaaaaa aaaaaaattt ctcagatgtg actcagtgaa

ggattttgag atggggagag tatcttggat tagccaggtc tgtgagaact cctgacqtct

gaagcttgac tcccaagttt ccatagcaac aggaaaaaaa aaaatctatc caaatctgaa

gattgcggtt tacagctatc gaacttcaca actaggcctc aattgttccg gttttttatt

ttctttacaa tttcacttag tctgtacttc atcattttga cagcatcttc ctccctcctt

taattaatgg aatcttctga attttccctg aatgtttaaa gatcatgaca tatgacttga

tcttctggga gcaggaacaa tgactacttt ttctggtgtg ttaacatgtc ggtgccgaat

tcgatatcaa gcttatcgat accgtcgac

```
<210> 950
<211> 1581
<212> DNA
<213> Homo sapiens
<400> 950
tttagtgtaa attggcaaat tttatttaaa cctaatgaat ccatgtaaga ctggactgta
                                                                        60
ctgtctcgat tatggagtct cattataaca gcatccttag gggttacatt gtggcactac
                                                                       120
ctaaaaggta aaagtgctgc aataagggct ctgcaggcaa ttccatcaca aaaccccatq
                                                                       180
gaataggatc acctcccacc aatcttttgc taagcactac tctctggtaa agagtacaga
                                                                       240
agtttcaatg ttttgatttt ttttttcca ggttggcatg atacaaatgg cagcacacaa
                                                                       300
aaacaatgtt aaaaaataaa ccaaataaaa ggctgtacac aagaacttat gtttattgca
                                                                      360
aacaaacaaa caaaaaaaaa aggaaagaga ggaaaagaga aaatggtcag aagcacaaca
                                                                       420
tataaggtta agaatttaaa agcatcttac attctgccct aatggcagca taattaatag
                                                                      480
caacaaacgg ccgtcttgct gcctgccgca gccggagggt atttttgcag acctgacgag
                                                                      540
caaattttgt gaaatatgta gtatgaagga agaaagcttg gcgggtcttc actgcagact
                                                                      600
ttggactccc agtgtttcgg actggcattc cctgcatggc ctggcgggac acgtgacttc
                                                                      660
taacacgagg gtcctctgta gttgggctag gagataactt ctcttcttct gactgggtgg
                                                                      720
gcattttcaa gcctccatat tttttccaat aaagccaaca aattgcacat aatctacact
                                                                      780
gcatattagg tgggccccaa gaataccact ggtgagactg tgtagcatag cagctctcac
                                                                      840
aggetetece taagagagga ttetgagget ggaaegtggt eeceaeaget eeatteaeag
                                                                      900
caccaggett eccattaeta gtggatattt ggttgggatt tggtttgetg taggttggga
                                                                      960
tatatacttg tttcagttta ctctcagctt ctgctgcttt tagacgtttc tgttgcacat
                                                                     1020
atctgtcagt agttttccac atgtaataat attcaatgat gctagtcaat gatttccaag
                                                                     1080
gaagaaaatc ttgccgtatg tcattgaagt ctttgccata tttttccagt gcctcttcaa
                                                                     1140
ataagctagc ttcagaggct gaccattcct ccatttcatc tctgcataaa acaggtcctc
                                                                     1200
cgagtggtac taagacacta atggcactgc tcaaatcata gctgtgtcta tacaatgtat
                                                                     1260
ccatagcgtg aaacaaggtg atgtctcggg aagctgcagc agcactcata tgcaaactag
                                                                     1320
gctgcctcac agaactgctg caatccaggg ctctggcgaa tgtcccaaca gcacgtgcta
                                                                     1380
caactaaaaa ctggtcaatc tgtcgatccg taagtgggct atttggatcc caaactttaa
                                                                     1440
cttccaattt tgattgttcc ctctcatctg attctccttc taacagcatt tctggaatgt
                                                                     1500
ctgcttgata tctaggtccc actctgattt cacctcgtgc cgaattcgat atcaagctta
                                                                     1560
tcgataccgt cgacctccga g
                                                                     1581
<210> 951
<211> 1263
<212> DNA
<213> Homo sapiens
<400> 951
ggcacgagcc agaaataaat ggcctaaatg gaggaggaaa gacccaaagt cttcctctaa
                                                                       60
tgtgttctgt ctccaagcag tgaagagaat gctttggttt taaactagtt aatcagaatg
                                                                      120
atatagecet cetteetgga atgaacettt eteactgeee eeetteteea aetgttggta
                                                                      180
tgtctcaata gttccttccc cacatatgca agaggctgcc agaatcttag aaatagcagc
                                                                      240
ctggtcttca gaaactctcc cctagttcct acctttcctc ctcctcccct ggctctactc
                                                                      300
tetecteact gtetaagaet attetgagtt gtggataetg gaeactgtat tttgaaceag
                                                                      360
ttctttggct ctcttctcag ccamctgatc atttattagg catatctctt tggtggttca
                                                                      420
tcctactttc tctccagata tcatctggat tcctggtata tctttgtggg ggtggggagc
                                                                      480
agccctaccc tgtaactgta ccttgtccag ctcctcaaat ccaagtttct cagaacccag
                                                                      540
ggcttgaaag gaaarattca acactaaagc tgtagctaat aaacacacag ggttggaagt
                                                                      600
tacccagcat acttgtagac atagaaacct tggccagaaa agcaatgact tgtccaagtc
                                                                      660
actgagaata gtaaatgaca cagaactgaa gtcccacagt gtctggttat tgtttttaat
                                                                      720
gtaaatgtac tactgtacta tagcatacat acacaaaggc aaacaaatca gaaatataca
                                                                      780
gattgagtct ctgaatgaag tttacatttt ggttctgagg atgaagctcg gaatttttta
                                                                      840
tcttgcccaa attcctatct aaggggtctg ggggagtatg ccctagaaac cacaaattct
                                                                      900
catcacatgg gttttattta accttgcata tcatgactta ttttccaatc tgactttggc
                                                                      960
ataacaagga aaaaaatcaa aatgttttac cccaaaatat atttccttgc cataccttga
                                                                     1020
aattgccctg caaagtctct cgtgggaaaa atccacatta tatggagaat ctccttcccc
                                                                     1080
ctttgttttc cttcgtctct ttccagatcc gggagataat cagctaagag ccaggcaccg
                                                                     1140
ctttaggtct gataagaaac attttacaac ctgctcgctc tctgaagtct gctttctgag
                                                                     1200
```

| agattcctct gac | gcacaataca | acctcgtgcc | gaattcgata | tcaagcttat | cgataccgtc | 1260 1263 |
|--|--|--|--|--|--|--|
| <210> 952 <211> 1347 <212> DNA <213> Homo | | | | | | |
| <400> 952 | | | | | | |
| ggcacgaggg agatgttgtt tgtgaagcac cacttcttcc gtacataatt cggcagagta agcatataag atattttgta tgacttttgt | cagatttact agatgagctc ctgtttatta ctaacttggc tacgcccttg atattgctta atgatactga ttatcaagtg | gcccatcct ttgaaagaat tttcacactc caatgactat acctgtggcc aatgccagga gaatatggta atggttaaac tcacacaact ctgtgtcatc | caagtatgtg caaggacaca tctccaggtt ttttttgtgc acttgtttcc gacatcactg aatccctttc gcttcaaggc | aatggatgga gctcatccta gttgcactac tcttatgtgt ttagtctttt aagatttgtt taatctgtct agctgtgaga | tgaatggaat tgcttttgga cgctgtatct ctgtatttcc ttatatatct tcagtagttc agcatatatg tactagaaac | 60 120 180 240 300 360 420 480 540 600 |
| tacactatct ggctgaggca agactccgtc aaataattcc agatcagcag ataacttgca atattaacca aatacattta aatggtttta ctgatatgat tggaaatatt | gtaaaatata gaagaatagc tcttaaaata taatctttag aatccagact aggatgaaag attgttaatt tgagacaatc tcattatgtt atgattcttg gatgaaacga | tttgcaaagc ttgagccag tttgccaaa aaaatagggc ataagaaact atggaggatg ggatcttatt ggggtaattt agaaagaagg gaatttgctt aattggcctt ttcatctcta | caggcacagt gagctttagt cattgaacct agagaaacat acaggacaca aacctataga tgaattgtga gaacattggt gtcctcatct caaaataata gataattgtt | gttacgcgtc ctagcctgag aaatttgacc tattttacac tgacctagtt tttaaagaga tttgaccgaa ggggtatttg acattctcaa agtctggatg gaagctgggt | tgcctcagga caatataatg atgcccctag catggagatg tcttctgtaa cttaagagac ctgtaaaacg gtattagaat acatctgtgg ttaagtgcat gatggctaaa | 660 720 780 840 900 960 1020 1080 1140 1200 1260 1320 |
| gatatcaagc <210> 953 <211> 1277 | ttatcgatac | | 5 5 | | | 1347 |
| <212> DNA <213> Homo | sapiens | | | | | |
| <220> <221> SITE <222> (150) <223> n equ |) uals a,t,g, | or c | | | | |
| <400> 953 ggcacagcag ctgcagtgag | ctactcagga ctgtgatcat | ggctgagatg gccactgtac | gaaggattgc tccagcctgg | ttgagctcag | gaggtcgagg | 60 120 |
| aaaaactcct tttgaaactc tggcatgtct caagtgtttt ggtgttctgc gccgaggtag aaccctatct | ttaatcttca ttggattaaa ggggatttt taatgaaaag agtgttttc gcagatcact actgaaaata | ctgtgtgctn caacaatgtt tgactcttca atagcaaata aggagacttg gctaaggtgg tgaggttagg cacaaagtag caggagatga | ttttcttct gagctttctt attyctcctt tttttagtga ctcacgcctg agtttgaggc ccaggtgtgg | tttttttga tgctttttga ggctactatc tgttagttgt taatcccagc cagcctggcc tagtacactc | gatggagttc tactaaggag cttagaattc ttttaggaaa actttgggag agcacagcaa ctggagtcct | 180 240 300 360 420 480 540 600 660 |
| gcctagatcg aaaaaaaaac ccactggaga atgagggcgg ctcttctgtg | cactattgca ataaaatgga gactctggat cagttgtgac aagcagctct | ttccagcctg gaggtagacc ctgcagccag ttctggatg gagagcaatt tagaaaaagtg | gacgacagag agcttacggg ggagcttgtg gtggcccaga ttgtgacatt | tgagactgtc aggtgttgca aaggcttctt ggaagcaaca gaaagagcaa | ttaaaaaaaa cttccctctg gtccacggaa ctggcagagc aggataaaac | 720 780 840 900 960 1020 |

| cctcagaaat acttacagta | tgctaaataa atagccaata | agaaattaac acattctttc | actttaatcc tgtttgtttg | taaatgtttc ttttgttttg | caatgtttta ttttgttact | 1080 1140 1200 1260 1277 |
|---------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------------------|
| <211> 1430 <212> DNA <213> Homo | sapiens | | | | | |
| <400> 954 | | | | | | |
| | gatgcccaat | | | | | 60 |
| | tacccagcct | | | | | 120 |
| | gtggaccaaa | | | _ | | 180 |
| | cattcattac agcacatact | | | | | 240 300 |
| | gctttgccaa | | | | | 360 |
| | catctattta | | | | | 420 |
| | aaggttatag | | | | | 480 |
| | tactacgtat | | | | | 540 |
| | gagatatgta | | | | | 600 |
| | ttttggtgga | | | | | 660 |
| | aarggaaagg | | | | - | 720 |
| | atagaaactt | | | | | 780 |
| | cctcacctaa gatactcatg | | | | | 840 900 |
| attctttgtt | tgccttgkat | ggtgaatgcc | tccatatcaa | taaactccat | tacccagcac | 960 |
| | tcccttcccc | | | | | 1020 |
| | agtttcggta | | | | | 1080 |
| | tcttgaagca | | | | | 1140 |
| | gaggaaggca | | | | | 1200 |
| | cagcaaggaa | | | | _ | 1260 |
| | gggttaagga | | | | _ | 1320 |
| | cctggacata tggggctgtt | | | | | 1380 1440 |
| taccgtcgac | | getteaacae | ccgcgccgaa | tttgatatta | agectatega | 1456 |
| | | | | | | 1430 |
| <210> 955 | | | | | | |
| <211> 1728 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 955 | | | | | | |
| | gccaccggag | | | | | 60 |
| | ctttcgcttt | | | | | 120 |
| | gcgctgtaac | | | | | 180 |
| | cccactggga | | | | | 240 |
| | aggagggtct actgtggaga | | | | | 300 360 |
| | gtcttctgct | | | | | 420 |
| | tgagctcaga | | | | | 480 |
| | ttcccaggtc | | | | | 540 |
| tgagtcatgc | aggttgtcag | ggaagttggg | gaaagctagc | ttccatgcac | actgaaaggc | 600 |
| | cccacaatgc | | | | | 660 |
| | gaaaacttac | | | | | 720 |
| | cccgcctgtg | | | | | 780 |
| ctatasatt | tccagcccca ttaccccctg | ctcctctccc | caccacata | agctagagag | greatages | 840 |
| gcaggaatgg | gctacttggg | gatccaggg | cattagagta | cctttatact | acttcctcta | 900 960 |
| | ttgctcagct | | | | | 1020 |
| | | | | | - | |

| tctccctttc tgcaagagca tcttgcagtc gagctgccat ttttcatatg tgcctatttt atattggatc tttttgctct attcgtctat cccgtgccta | ccatttccgt gtctgcttcc catctggagc ctagttctgc attgttggca taaaggtttt tttgtcgaat gttaatagtt ttttgctttt | ggttagggga ttcggagggt taaaattcac ctcctgtctg gcatgtatgt tttttttgt gcatagcttg tcttttgctg gtcacaattg ggtattgcct | cttaaagtat ctgtgggtcc aacgcaagcc tcataatccc cttctttga aaatttgttt caaaagtttt cccagaagct ctttggtgt aggttgtctt | ttggggtgtc tgtcaggatt tccgcatgct tcatgacct gaagtgtctg aagttccttg ctcccattct ccttagttta catggtttt | gagacgaggg tcccaggtcc gctggtctac gctcgtcca tgagctttt atcaagttt tagatgctgt gcaggttgtc attacatcc aaattttcgt tatagtttt | 1080 1140 1200 1260 1320 1380 1440 1500 1560 1620 1680 1728 |
|--|--|---|--|--|---|--|
| <210> 956 <211> 498 <212> DNA <213> Homo | sapiens | | | | | |
| tacagttgag cctctggcta aacacctaag gcccctggga atccgggaat ggatcctcag | gctttgccaa ggtgaaatac agccccaggt caggccctgg gatctgttcc atgccctgcc | ctgaactcat caacacgccc agcatccaac gctccccaga cctccctctc catggcttca | gtctctatca tgccctctgc agcacagcag gccacaccgg ccctcctccc atattccctt | aaaagtgaga agacatgtca gcagcatgcc gcgttgataa ctcctctctc gcatacagat | gagtgctctg gcctttgccc aacagcaccc cattctctgc cattccccc cacccaaagc | 60 120 180 240 300 360 420 480 498 |
| <210> 957 <211> 502 <212> DNA <213> Homo | sapiens | | | | | ε. |
| tggtccccag ggattttgat gccactttta gaaaaaattt gcccaccatt atatgggcat acctacacaa | tcagggtaaa ttggtgtgag tctgcttctg tttatgtctc atccttacca aggatgcctc tgatttagtt aaagaagcag gataccgtcg | aaaaaaaaa aatggctgaa ttactctttt caccttcctc agaccataag aatttggcaa tctcattaga | agtagaaatg aagctttcca gtggcagagt ccaaaccctg gagctgttca gtcttcacaa | ctgattccca aaacagcttc ggttgcagta ttagttcaac tttcaggact gtattatctt | tgatctggta catggtttat ggaagtgaag taggtaataa gttcctcagg ttaaagtaag | 60 120 180 240 300 360 420 480 502 |
| <210> 958 <211> 1099 <212> DNA <213> Homo | sapiens | | | | | |
| <400> 958 gtggcactcc tggcaggtgt aacaccagta aatacaatga aattgcaaca gaattgtagc tcacaggggt gatggttta atgcctttgc ctgtgagtcc | ttgcagtaag tgatcttcct ctattcatgg atatttacac tcccataatt gggttttycc taaacggcag ccctcctttg | cagtgtcagc aaatcatata gtatttggta cgtgacatgg cccacacgtc tgtgttgcta ttcccctgca tcttctgcca | tattactact acaaaatcta ttgtgctaag tttggctgtg atgggatgga tcatgctagt cacactctct tgattgtgag | ttatatttga agttaaaata tcctagacag ccccaccaa cctggtgaga gattaagtct tgcctgccac gcctccacag | ctgatactat acaaaaatga ttatttggat atctcatctg ggtaattgaa catgagatct catgtaagac ccatgctgaa | 60 120 180 240 300 360 420 480 540 600 |

<213> Homo sapiens

```
agcagcatga gaatggacta atatacactg gaaactgaga cttcatttgg tcatttttga
                                                                        660
 caccatgcca ccagaataaa acaggtacag gataatggat cctaccattg attggaaatg
                                                                       720
 atcatctgca ggaagagcac caatggaata caaagggtgg aacccaaatg cctctatttc
                                                                       780
 agcatgtcca gtgtcaaatg ttcaaagaat tgtatagcac tttatataaa taagactcca
                                                                       840
 ataattaaac ttttctatat ttctctgtca cttaagggat cttggaagct gagtttcctt
                                                                       900
 tggcgccaaa gagaacatgg actggacaga agaatttgga agtcataagt acaaactata
                                                                       960
 actttaggat ttgttacaga aataagtatt gtatcttcta ctatattttc atttttatgg
                                                                      1020
 ttttataaat aattctaaaa tgcagctaat ttctcgtgcc gaattcgata tcaagcttat
                                                                      1080
 cgataccgtc gacctcgag
                                                                      1099
 <210> 959
 <211> 1757
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> SITE
 <222> (10)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (1293)
 <223> n equals a,t,g, or c
<400> 959
ccccagtccn ttaaccatcc cacacttaac ctagggcgtt tgctttgtct ttgaacgtcc
                                                                        60
tcacagtttt agatatgtta agctgtaaaa agttttaacc ttttctaaac tacttttgct
                                                                       120
tttmcctttc gttttcctcc ttttggtttt tgtattatca gtacagtcaa tatctgattg
                                                                       180
cagttacaga tcccaaatct gatgatttgg aactagtatc aggtctaaac tttgaattcc
                                                                       240
cagttgtttc agagattttc acattttcca attcaggatg cgatctcttc ctttttactt
                                                                       300
ccttctctgc tgtttcctgt gaatcatgaa tcacttttgt cttactaaaa ggagcctttc
                                                                       360
cataggteet gagtettetg ceatteeace tgegeageea taatteagtt ecaetteaaa
                                                                       420
attattctct gcagtagctt tttgtgccaa ggttgactct gaagaaaatg tcctatcagt
                                                                       480
ctcactccct ggaatatgac tttttgawtc ttctcctgaa gatgtaacag aggaactttt
                                                                       540
tcttttagaa ggtgcatcta ttttgtgaat attggtatgc ctgtgcttgt gttctgaatt
                                                                       600
cmacatatct tcaragtctg agtctccatt tagagcctga ctaagcactt ttgtactacc
                                                                       660
ttcggagtca ggatcaggtg gcttgccttc acaggcatac tgttcacttg gtacttcaca
                                                                       720
atgtacactt ccttcacaat cactcaattt cttcttagct gtagtacaag caagatggag
                                                                       780
aggttttttc cttccatttt tgcttctagt gtgcacattt tctaaactga catcttctac
                                                                       840
atcactcatg agcttgatct tattggcagc cgtagctgca catcttcgag taatcctcag
                                                                      900
gagacctgtt ctggcttttg atgatttctt aaccacctgt aaactactgt ctgagtcact
                                                                      960
ggaacagacc cttttcctgg aaatttttct gcttagtcca ttgtcttgtg atgcagaatc
                                                                     1020
taaaagttaa agagcagatt tctattaatc ttttgtaagt ctaaaggaat tatatgttca
                                                                     1080
atattaaaaa caagttcaga attcgtatta atttgaaggg ggtattgcag tgaatggaat
                                                                     1140
ggtacacacc tattagtata gtcatatgtt gctcaacagc aaggatacgt tctgagaaat
                                                                     1200
gcatcgttag gctatttcgt cttaagcaaa catcacagag tgtgcttaca caaaccttac
                                                                     1260
agtacaccct actacacatc taggttatat ggnatagcct attactycta ggctacaaac
                                                                     1320
ctgtatgaca tgctactgkt ctgaatcctg caggcagttg tcacacaatg gkaagtctgt
                                                                     1380
gtctgtgtat ccaaacagaa aaggtaatgc actgcactag gacttgagga cagctatgat
                                                                     1440
tacttcacta agcaatggaa atttttaacc ttcattataa tcttatgaga ccaccactgt
                                                                     1500
tatgcagcac atgactgtac tttaaagcag taactttttc atcctcagca ccattcacaa
                                                                     1560
attcaacaca ttctcaataa catcccatga tcttgacact ataatattaa catgaataca
                                                                     1620
actaaactgt ttaccatagc actagcatat gcaaagtaat cacttaacac tcagcctctc
                                                                     1680
tgaaactccc cgtaactccc caagctccaa ctcgtgccga attcgatatc aagcttatcg
                                                                     1740
ataccgtcga cctcgag
                                                                     1757
<210> 960
<211> 1326
<212> DNA
```

```
<400> 960
ggcacgaggc cgcctcaggt ctggggtaaa atctcacgga gggtggcaat gaggaaagcc
                                                                        60
tgagttattt tccttcacag aataatttgt ctcccatgag ggttttttta ttaagggtct
                                                                       120
gggtcacctc tctcctgtgg ccgggggcgc tgctgtcagc tgttgctaat taacccatat
                                                                       180
ttgggcagcc agaccccgca aagcccatgt actttcctga accttcagag taaatgccat
                                                                       240
gcatcagcac caaacacaaa gcctgcgcct ggctctgaca tttggagagc ttaccctgca
                                                                       300
tgtactttac cttaaagcta ttgacagtag gagattaaag tcctcgtgat gcatcctccc
                                                                       360
aaggcagtgg acaacagagc cagcaccaga cagagcatgc gaactcagga gtcacagttt
                                                                       420
agcggccaaa ctcagggctc accctgggcc tctggaaaac gctgggcctg atgagccatg
                                                                       480
gcccacactg cagttttgac actccacgga ggtgccaaga tctttggaga atggtgagag
                                                                       540
gctggatgtg ttaagatgca taccacaaag tgtagctccg actcaggagc cccgtgccgt
                                                                       600
gtgactggat gggcgtttca ccacaagcgt attgtttcta gacccctgtc tcagcaggca
                                                                       660
agctaagggg tgagtggttc actgaaagac acttgtagaa actgccactg ggctggccac
                                                                      720
tgggcacaca agaaactcag ctggcaagtc caggggctgg tgtgaccatc tcagatctgt
                                                                      780
cactaacccc cagtgatgtg aggtgtcatt cagctctcag ggagtcattg tggctgctca
                                                                      840
ggccacttcg ttcttcaagt ccctgcctga ttcaggctaa atgaaggccg tatgggtcag
                                                                      900
gctcactctg cctccctcca ctcagtgtat atgtaacctc agtacattct tgctcttaag
                                                                      960
atgccaccac ggccacccaa ccaccgagaa cgtgactttc gctttgacct tggaggtgaa
                                                                     1020
tgtctgtggt cattttttgg ctgcccagcc cctgagcctc tccctgtgtg taagtcttgg
                                                                     1080
agagaggeee acceecegg ceateacaga agetgagaag geeteaggge tetteetggg
                                                                     1140
gctggaggct gggaggcagg cctgtgaacc tgggctcgac agacggaagc cctccttagg
                                                                     1200
atctgcctct ggagctggta gggcagagga ggagggactg gctccgaatt tattctggtg
                                                                     1260
tcagtagcag aatctggcat ccagtgttgg cctcgtgccg aattcgatat caagcttatc
                                                                     1320
gatacc
                                                                     1326
<210> 961
<211> 1237
<212> DNA
<213> Homo sapiens
<400> 961
aggcaaaaga tgttgtccaa agtccaggaa tatgtaagtt gaaagctatg tgtgcagcag
                                                                       60
aaccttattt ctgagttaca cagtttagtg accttctaat ggaaaaaaac ttcacggagt
                                                                      120
gtgttttcca ctgccttctg ctcaccacac tgaggattac aagaggaaaa cagctacacc
                                                                      180
agagtcaaaa gtgatcagac ctctgatttc ccaactctgg cagagaagct gcaacgcgcc
                                                                      240
gegeatacae acaeacaea ataeacaea aettaeaeae ttteeageea geteageega
                                                                      300
etteetetga gagatgacae caetttgeag ceteeetgtg ggacagagtg gaacttgtaa
                                                                      360
ctcactttct tgtgcctccc aggactttgg ctgcctagaa ggaagagaag ggagtgctaa
                                                                      420
ggcttctctg agaaactcag agcttcctct gcagccctgc tcctggccag catgagagga
                                                                      480
gggagcttga accaagagtc ctctcctgga ggggaaacct atctaagaaa tattttctat
                                                                      540
caatcagtaa ggctctcaaa agccattact gccaacatca tttcttattt gccatctctt
                                                                      600
ctccccctt taaaaatgtc cttacttttt ccctttttt cccgtctttt ctttcttgtc
                                                                      660
cattcccttt ctttttctg acggttttgt aaaggggagg taccctgcac acactctctt
                                                                      720
ttttgttttt gttttttaa ttttacttta agttctggga tacatgtgca gaacgtgcag
                                                                      780
gtttgttaca taggtatacg tgtgcgatgg tggtttgctg cgtccattct tttttttt
                                                                      840
attittaaa atcctettee ticattiete eeettetgee teettetate eeeetgteet
                                                                      900
caatctttct gtttttcttg ctttctcctc atttttctct ctttcttgtc tccccttcat
                                                                      960
agctaaagtt accgtccttg gcacaggact cgggttctga ggagtgacac agcaggagtt
                                                                     1020
catectgggg accetetege aggeageget geacataggg aacetgteee ggetgtggga
                                                                     1080
ggccaggcag cctcccctc caaggcagag ccagacgagg ctgtccatcc tccttqcatt
                                                                     1140
tctctgtcac cttgttcaga cggcctttga cttgggggga gccacgctga tttacactcg
                                                                     1200
tgccgaattc gatatcaagc ttatcgatac cgtcgac
                                                                     1237
<210> 962
<211> 1127
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
```

```
<222> (336)
<223> n equals a,t,g, or c
<400> 962
tgccgcaaac tggcatgggc caaagctgct gttagtctcc ttttgcccat ctgtctcagt
                                                                       60
tgctattcaa ggaagggcat actaaatcta atggttggaa aaaaggagca gaggggccat
                                                                      120
tcaatgccaa gcatagacag tttatgtttc actaattaca ctcaaagaac ctqqqcctta
                                                                      180
tcagctaaaa ggtgatttct ctttttcact ggtattaaca ttgttactta ttgcttatgg
                                                                      240
taaatttttt ttgtttgtt ttgttgagac gagtctcgag tctcmaaaaa aaaaaaaaaa
                                                                      300
aaagtgaaag gcatgaacgc tgtaaagaag cccagnaatg gctgtaactg aatgcttcac
                                                                      360
aagtctacga tttcaaaacc atacactatc ctataacaat cccyctactt ataaccyctg
                                                                      420
aaagtttaaa gaaagaaact tacttaatga catcaaagag atgaatttcc gwtytacaga
                                                                      480
tgcagtaaaa ctctttataa cagagttttc gtcttgtcca agtaagagtg tatatttggt
                                                                      540
taagatacgt gagttaaaca tttgcacgta agcaaagtaa tttccatgtt tttcagtaat
                                                                      600
aaaaattaaa acaggatgtc tgaatactac gaaaaacttt gtccatttaa tcacttcttc
                                                                      660
atcagagata acagtttcaa ttttctgctg ggggtctgca agcaaggcct ctaaaccacg
                                                                      720
aacagcacct tccttgaaga gcaccaaggg ttctgtccct tgcactgaaa gtatcctata
                                                                      780
tacttctgct gacaatgtag ctttaaatac tttatccagg tttacatctt cattattcca
                                                                      840
tattettaaa acettattat egtgtacaac aacataetet eeagtttgaa agttgeacae
                                                                      900
agctggacat gttataattt gaccttgttt cactgaccag ctccccaagg gtttctgatc
                                                                      960
agaaacctta tagaggatga ctgtcctgcc gctgtctgtc actagaaact ggtctgtttt
                                                                     1020
gtcgctctgc tccacgccta ggagtccttc aggcccggcg ctcaggacta ccgaagacaa
                                                                     1080
cgtgaattct tcctccagcg ctgccatttt gcggacgcgt gggtcga
                                                                     1127
<210> 963
<211> 1391
<212> DNA
<213> Homo sapiens
<400> 963
gaatteggea egagattaca tgataaatge aatagaatge taateettet tetagaaaat
                                                                       60
ttcaagatgt tcacttaaaa aacctttcga gtcattttta aaattgtagt cctgaccttc
                                                                      120
agtacgtgtt aaacaggttt tttcaaaatt taatgaggat gagttttcat atgatagtca
                                                                      180
ttttacttca gagtattaca aaggattcaa caattttagt ataaaatagc agaacttgtt
                                                                      240
acatatgtat ggtctattac tagctcagtc taaattttgc acatctatgg rgtctaaaat
                                                                      300
tcaattggga ttacatccaa ctttttgttt aagtagcaaa gtaaaaaaat taaaatgcct
                                                                      360
agtettaaat gaaccatagt ttgagaetee attetettet cagecaettt etggetteae
                                                                      420
aagagcaact gtagcttttg gatattaggt gagatttgga catttccata aagcaaaqca
                                                                      480
tgaatagaat gctggctgcc tttcacctca tctcatccat taactgtgaa aggtgagagc
                                                                      540
cagcettatt tttetaaata teatgattte aatatgtage aaatgataea aetgaaaaat
                                                                      600
aatttttggt atctacatta tgcttagagt taacatctaa actaaccacc atttcccact
                                                                      660
caaatattta tttaagtccc tggaaaactt taatcattat tgttgacttg tttttactca
                                                                      720
tttwcagatg tttcttttca tttgttattt actcattaga atattcactt agtgtaagga
                                                                      780
raratkgctg ttcttggaga tacraagact tcaaggagtt tacagawttg sttgggaaaa
                                                                      840
ttagagtwtc wtaawtgaag caaactgcta gatgaatgtg ctggtttaca tatagaattt
                                                                      900
gtttctttct agaccagtgg ttctcaaatg tgattcctga accactggca ttagcacacc
                                                                      960
tgggaacttt ttaaaaattc aaatttggcc tggtgcatgt ggctcacact tgtaatctta
                                                                     1020
gcaccttggg aggcctagga gagaggacag cttgagccca ggagttcaag accagcctgg
                                                                     1080
acaacaaagt ggaacctcat ctctacagaa aataaaaaaa aaaaaattgc catgtgttgt
                                                                     1140
ggtgcatgcc tgtagtccta gctactcagg aggctgagat gggggaacac ttgaatctag
                                                                     1200
gaggttgggg cagcagcaag ctatatgatc tgattgtgcc acagcactcc agcctatgtg
                                                                     1260
acagagtaag agcctgtctc aaaaaaaata tgcaaatttg aggttttatc ctagacttac
                                                                     1320
tgaatcagag actctgggag tggagctcgt gccgaattcg atatcaagct tatcgatacc
                                                                     1380
gwcracctcg a
                                                                     1391
<210> 964
<211> 1856
<212> DNA
<213> Homo sapiens
<220>
```

```
<221> SITE
<222> (1176)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1181)
<223> n equals a,t,g, or c
<400> 964
ggcacgaggt ttctttggcc aagtgggaga agagaactgt gacgaggcat tggggaaggc
                                                                        60
caggggctgt caccccgtca cagctgtgtg catgggcaac gcatcttagg agagtcaatg
                                                                       120
gagagtgagc atccacagtt gactccctta aaaccagctc aggccacacc cacccaaga
                                                                       180
agtctctgag gacatcttga gggatgcagg cccaatttaa aactcctgcc tacagcaagg
                                                                       240
tgtctgtctt aatactaaca cactgcattc tatgggtctg gtaaacatct gccatctcca
                                                                       300 -
ccccatggga gcttcttaag ggaaagcatt gagcttcctt ctttcattca ctccctcagt
                                                                       360
cgatcagctg gtcagtcggt cagtcaccaa taactttgtt ttttttaaca aatatgcctq
                                                                       420
agtacccact gtgtactggg gcagatacag ctgaacaatc ctctaggaac tcacaggttt
                                                                       480
ataagagaaa caggaaaaag tggaggaagt ggaaggaagc caaagcatcc atcctttcac
                                                                       540
tttcactgac cactgagtgg gtctcgctgg gtctcagtga aaagaaagcc gtttctactg
                                                                       600
ctttaaccct ttccaatgca tgtcccttca gacagagtaa cccctgtgag ctggtaatca
                                                                       660
aacagaatwt tattcaagtg aawcaaacaa tggagaaata tggagtaccc caaatttcct
                                                                       720
ccctttaatt tgcacatttt gaagtgccga tattagtaag tagtttattt acatgaacat
                                                                       780
acaggaaatt taacctttaa gagtttgtaa aatacggctt agtttaaatg catttatttg
                                                                       840
tctaaaattc ctggtagtta attgtacttt tttttttggc aagttttcac ttgaaatctc
                                                                       900
aaagtacttt aaagtaagat ggcattaaaa acagcaacag gaataagccg acgtgtctta
                                                                       960
agggeteace atgtttagae actaagtgee gttaacatgt ateactattt acteettgaa
                                                                      1020
ctcgtcctat ttgttattat atacacacca tatactgtat tattattatt gtctcagctt
                                                                      1080
caccgataag gaaccctagc ttggtgagtt cagaattgct ggcaggttag ggaggaatgg
                                                                      1140
acagtggaac ccagccctgg ctgtgcccag accccntttc ntctgcaata ctgtctqcyt
                                                                      1200
ctgaggcgca tggagtcctt ctccagctct tcaaagcgtt gcaggtccat gttqtcccaa
                                                                     1260
cagaatttaa aagtgcaggc cagcatcacc tgcaaagtcc caggttqqaa qaqaacytcq
                                                                     1320
totatactto tacgggcaga taaggtcaga agtacatttt ccaqtcqcca cqtaaqctqc
                                                                     1380
agctctctct agataaaccc gtgtctggaa tagaagaaaa tgctccccac gtgctggtct
                                                                     1440
tetetgtgae ettttaatte tggggeeegg ggeteeettg ttggteaget etteeeteea
                                                                     1500
caccatccat gtgctgaggc ctcaagccac cactgctcca gcctggacst cacccstaaa
                                                                     1560
cccagtcttg tgagtgcatt ttctacactc ccactaggtg tttaaagact tctcaacctt
                                                                     1620
agtgtgtccc atagagggtt cctgagckcc ccccagagct ctgcstctcc catctttccc
                                                                     1680
accttagtga agtcactcca gatcacttcc tgtcacctgg aaaatgtgga gggtcctcct
                                                                     1740
ggagteetet gttteteteg caacteacae tetgeacaea agteeatgga atggatteag
                                                                     1800
gatccagcct cgtgccgaat tcgatatcaa gcttatcgta taccgtcgga cctcga
                                                                     1856
<210> 965
<211> 1558
<212> DNA
<213> Homo sapiens
<400> 965
actttaaaga tttaaagata ctgaagaggt taaaaaaaaa aaaggccctc actgagccta
                                                                       60
tgtaaagtga tgaattgctc cacaaagtga tgaattgctc cgcaagcaac atgcagaaat
                                                                      120
attgcacttt agtgttgtaa ctcacttaca ttcctagatg atgttcatgt aataatagtt
                                                                      180
catacatgtt gaatgtcaaa cacatgccaa atatctcact tgtattattt gtaacttttt
                                                                      240
tcccacaata ttttagggtt atatagatgg ctttgagact cagagaggcc aagaaaatat
                                                                      300
tttgtgggtg aataactagt aaattggaaa gctggagttc agacttttgt ttacatgact
                                                                      360
tcaaaaccca tctcttagtc tgtacctcat tggctctcag ggatctttct tagacacctc
                                                                      420
attgtctatg ctctgtgata gtttgaccag ttgtgtttga taaaagagat agagatgtac
                                                                      480
aaatccaaat ctgcaaatcc ttgaccatgt accatcattc atgtaggttc tattctgatt
                                                                      540
caggacctgc ttggagcctt ctctccaact catatggcat tctcccatcc tgacaatctt
                                                                      600
ccctgagtct tctgcaagtt gtagaattgc tcctcccct ctgctataag gcctgcatat
                                                                      660
aaaattggct gaggaatgtg cttggctctt ttcctaaaga ttataaaatg atcatgaccc
                                                                      720
```

780

tgtgaggcct taatgcccta cagagagaag ccctaaaaat ctaaactcaa ggaaaactgt

```
gtttttcata gtccagactc atttgtatta aatagatcac aaccagataa tccctgagaa
                                                                       840
 atttattata tcaaagtttc tcctttttga gttgatctaa aggctaggaa gagccttgca
                                                                       900
 catacctttg argatagatt atgtgtatgt gtatggctag gaatttacgt gtattaattc
                                                                       960
 cttaaccatg tatgactgag ctcccatgtg acaccaaact ttcttttct gagccatttg
                                                                      1020
 ttgtgagttc tttgtgcttt tttaaccttg tctcctatgt tttcctacaa accacgtctc
                                                                      1080
 cactagecat actgaactca atatttette tttacateat tttaggeaag etgtacatta
                                                                      1140
 ctggaaagag atgatgggta aatatactag gtgaaggcct aacatgtgat ttagctggct
                                                                      1200
 atgggtttaa aagctcatca gaagtgaggt tgctgcacac aaaaaaagga gaagcagcag
                                                                      1260
 tgaatattag caaaatattc tctaaaagct cttcttttct aatatgggtc ctggggaccc
                                                                      1320
 tgtccactca aaggagggtc ttcaaatttg ggaaatatat gaattttagc agcatcacag
                                                                      1380
 attttatttt actgttgttt tgtttttagt aagtgaaatc tgagtccaca tgcccgaaga
                                                                      1440
 acttatatca tctatgtgaa atcatatctt ggagaaaatg aataggattg gggacagtgg
                                                                      1500
 cagcaaatct tetegtgeeg aattegatat caagettate gatacegteg acetegta
                                                                      1558
 <210> 966
<211> 1858
<212> DNA
 <213> Homo sapiens
<220>
<221> SITE
<222> (490)
<223> n equals a,t,g, or c
<400> 966
agcettactg atgeattete gaaaacetgt tagggteeta agcattetee agttagtatt
                                                                       60
gggactttac ccctcctgta aagatgttat gccccaaaaa tgaagtggag ggccatatcc
                                                                      120
tgagggaggg gagggatcty cagagttgga agagtgatgc ctttttgtcc gcacttatat
                                                                      180
gaatacaaga atgtcatttc tgaagctccc cgtatcctag cttctggaat agcttttgtt
                                                                      240
aggcctgcta gtctgaggag ggatccyaaa attccggata agacagtccc ccaccctgat
                                                                      300
ggggstttgg gcaaaaatta tgtctttcta attggtgagc ccgggtgcct aaagaaggtt
                                                                      360
aacagagtcc tggagtttat actagaaatg attcttacag gagaaactag aaaagcacca
                                                                      420
gagacaggga gtggtttcca gaagcgggac tagcctcaga gaagagaggc aagagaaagt
                                                                      480
tttkctgacn mgcattagga yccaggaggc aaggstcagg ataggtagga tagatgggcg
                                                                      540
agtctcgctt gggcaacatg acttcgagag ttctgctcat ggccacaggg tcaaccaact
                                                                      600
tgttgtcagg accccggagc tgaatggctt tcctctctgt cgaccctcgg ctcagcccgg
                                                                      660
aagtacagga aaagcggaaa gctggttcca ggcaaaccaa cactcccaac tccgaagagt
                                                                      720
caggggttgt tagagagccc tatcccggaa agcctgacac ccgtgtcttt agtccagcgg
                                                                      780
ctgtgctagt cagttttaac tggccgctag tcacttttaa ctggccgaca ggtgcctggt
                                                                      840
atttagccac cgaattctaa gggaaaacag gacagaatag caagtgaaag gggtcagatg
                                                                      900
gtactcactg cttggcaata gcgtcagccc caagtgagga tggggaaggg gttttacagt
                                                                      960
cctctataag caggaattgt cccagtctga tgtggctgct gcgtagtgcc cgctggccty
                                                                     1020
cctcttgatc ttcarggggt gtcttctgcc.cagctctctt cttgcttctg ctaacttgct
                                                                     1080
gatgcatgct gctggcgcaa ctgtccttgc gcatttggac tgggcttgaa gagggaggaa
                                                                     1140
gtattcattc ccttaagctt tcaggcttgg gggagaatct ttcacaaccc aatgatactc
                                                                     1200
ttttaaagtt actttaaaat gtgcaataaa gttttgttga ctgtagtcat gctgttgtgc
                                                                     1260
tatcaaatac tagatcttat gcattctatt taactatatt tttgtataca ttaactgtct
                                                                     1320
ctcccctcac tcccttctca gcctctggta accattatct agtctctctc tccgtgagtt
                                                                     1380
caattgtttt aatttttagc ttccacaaat aagtgacaac aggcaaagtt tgtcattctg
                                                                     1440
tgtacctggc ttattttact taacataatg acctccagtt ctatccctgt tgttgcaaat
                                                                     1500
gatgggatct cattetttt ttatggetga atagtaetee attgtgtata tgtaccatgt
                                                                     1560
tttctttatc cattcatttg ttgatggaca tttaggttgc ttccatatct tggctattgt
                                                                     1620
gaacagtgct gcaggaaaca tgagactgca gacctctttg gtatactgat ttcctttctt
                                                                     1680
ttgggtatat actatgagtg ggattgctga gtcacgtggt agctctattt ttagtttttg
                                                                     1740
gggatcctcc aaactggtct ccatagtgct tgtactaatt tacattccca ccaatggtgt
                                                                     1800
atgaggattc cctcgtgccg aattcgatat caagcttatc gataccgtcg acctcgag
                                                                     1858
<210> 967
<211> 1760
```

<212> DNA <213> Homo san

<213> Homo sapiens

| <400> 967 | | | | | | |
|-------------|--------------------------|-------------|--------------|--------------|------------|-------------|
| ggcacgaga | a atgagcccct | cgatcctaac | ctatcccact | ttatagctgg | ggaaactgag | 60 |
| gtccagagt | c atgcagcggt | ttgtcggatt | atgcgggaac | : atcatcatta | tttggccatg | 120 |
| tgtggccat | g tcctaggcag | ttctcccacg | r ctttacctcc | : atctatcctc | accacagcct | 180 |
| cagggggttg | g caggggtatc | cccagtctac | : agatagcagc | agggcacagc | tacttaccca | 240 |
| tagacatca | a gcagacaggc | ggtactggac | ccagacctgo | tgactgggag | ctggcacact | 300 |
| ctaggagga | c ctcctgctca | ggagggactg | ggetetegee | tgctctaacc | cctgggagct | 360 |
| ottgegaeeee | c tcaggcctca | gtgtcccagg | ttttgccact | gcaaatcacg | acatgttaac | 420 |
| actoctoct | cacttcccca | aagacgcctg | aattetteae | ctgctcactt | catctcaccc | 480 |
| agtgettae | a accatcctgg | gaacctgtga | tcccatcacg | cccattttgc | agatgaggaa | 540 |
| accyayycac | tgagagacaa | catcactcat | cggggtccga | accttggaga | cctagctcca | 600 |
| ggaagetete | gaataccaag | gigegiette | cetagggtee | tctcctgcac | agaatcacct | 660 |
| cadaactaac | g agaatacacc | aayytttyta | geeeeeaeee | ccaaccccac | ccccacgatt | 720 |
| agcccctagt | tggtctgtag ctgcggggct | catttactta | cagaaggatg | acceptgac | tctaaggggc | 780 |
| tggaggagga | agatcccaag | gggaactcct | cagaageeee | acacette. | ctatgegege | 840 |
| ggggatgtg | gccttcctcc | acattocaat | CCCacaccc | agggggaga | gyaaggcaca | 900 |
| agcggggcaa | aggcgatgca | gatataagac | tgacgcgcgt | cctccacca | greeceagga | 960 1020 |
| cagtggtgcc | tcccgcaccc | tatactccaa | ggaagegege | acctgagtga | gggccaatgg | 1020 |
| ctcccttgca | tggaaggtga | ctttggaact | tcatgaactc | aacatgacag | ctccacaac | 1140 |
| tggaggcagc | gacaaaaaac | agacagaggc | agagggctca | gtctccagat | ttagtagggt | 1200 |
| gacaagcctg | ggccagcaga | gaccacatgt | tccaggcagg | gtccatgcga | ggagatacac | 1260 |
| gtgccatgca | ctctgccttg | ccttggggac | acaccgcccg | caggagacgg | ctcagcacct | 1320 |
| gcatcagcga | gtagacactg | agtgtcactt | gagtgccaag | ggtggagcg | gagatcacaa | 1380 |
| cctgagcgcc | ctgctgtgtg | gccctgggcc | ctccagtcta | cctctctgag | ctactateta | 1440 |
| cttcccccag | tgcaaaaggg | gagaaaagtg | tctgctttgc | cagggggctg | agaggaggca | 1500 |
| tctgagcccc | tgccccagtg | tgtgggaaat | caagtctccc | cccaggactt | cacagaggag | 1560 |
| atgggggaca | ggggcaaggg | ggctccctgg | gacattggcc | tgtctccttt | tccatctgcc | 1620 |
| catgcctctc | tgcaccctct | tcccacccac | ccagctggag | gggagccccc | atctcttaat | 1680 |
| ccttgctctg | cttttcacgt | ttgctctctc | tctctggacc | tcgtgccgaa | ttcgatatca | 1740 |
| agcttatcga | taccgtcgac | | | | - | 1760 |
| | v | | | | | |
| <210> 968 | | | | | | |
| <211> 588 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 968 | | | | | | |
| | ~~~~ | | | | | |
| tetaegeacc | cggcacgagg | agaaactaga | aaaagtcatt | ctatgggcag | caggcatcct | 60 |
| graacactga | aaattaaagg | cagggtggga | gatggggaca | gtggagcagg | aaggaaagca | 120 |
| caddtacatt | ccaagttcac | atgaacettae | agagttaagt | gttaccagtt | accatgcacc | 180 |
| atggccaggg | ctctcccacc cattctctgc | taaaacatac | griagatacc | accagcaagc | accagaagcc | 240 |
| acattcattt | catttgtatt | ctttcttatt | cattaatta | aayaayaaca | caatgcagct | 300 |
| aaaagtaaaa | aacacaccaa | ccttctcaca | actetaacca | atayttttgt | aaggtgggta | 360 |
| aacacaatga | aatgaggaaa | ggagaaaaa | aarrraaara | argraygggg | cttgatgcag | 420 |
| tatcaaggct | ttcaactgct | acttgaacat | Ctttattccc | tetagttest | aaaaayycca | 480 |
| tcagctggaa | aagttagcta | ttotttctaa | taccatottc | tcatacca | cetteetate | 540 |
| 0 00 | 3 | | caccacgeee | cegegeeg | | 588 |
| <210> 969 | | | | | | |
| <211> 1453 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | _ | | | | | |
| <400> 969 | | | | | | |
| gaattcggca | cgagctgggc | tcaagcaatc | cccctgcctc | agcctcctga | gtagctggga | 60 |
| ctgtaagtgg | gcaccactac a | actcagctaa | ttttttaaa | tttattttc | gtagagggtg | . 120 |
| tcttgctttg | ttgtccaggc | ttgtctcaaa | ctcctggcct | caaqtqatct | tectacetea | 180 |
| gtgttccaaa | gtgctgggat : | ttacaggcat | gagccactac . | accatoccaa . | agtcacacct | 240 |
| cccctgtccc | ctgggatatg g | gcccaggaaa | gcctgtcccc | tctggggctt | ctaattcttg | 300 |
| | | | | | - | |

| tctgtgcaga acctagcgtg tgtgcagagg gataagaatt gaatgaggtg atgtctgtga | 360 |
|---|--------------|
| agtgcccagc atagtaacta gcatacaaca gactgttagt agttggtacc ttatttgagc | 420 |
| gttccagaat cactacattg ttccctgcca ttatttawaa tamaaaattc accttttaaa | 480 |
| ttgtgggage tetgetttag ttacatatga agetggettt teageagttg ceattetgta | 540 |
| ccgacattig cittatatat atatatigtt tgittgittg tittitgaga cagagicici | 600 |
| ctctgtcgcc caggetggag tgcagtggcg cgatetcage tcactgcaac etccacetee | 660 |
| ctggttcaag caattetett geeteageet eeegagtage tgggattaca ggtgegtgee | 720 |
| actatgccca gctaattttt gtatttttta gtagagatgg ggttttgcca tgttggtcag | 780 |
| gctggtcttg aactcctgat ctcaggtgat ctgcccacct cggcctccta gagccacatt | 840 |
| tgctttaaag acccccgct ttgcacaact ataaatgagt gagtgtcacc tctttttgga | 900 |
| ctagtctccc caggaattcc cagctgactt ttttcatttg ttttgtttwg tttagttttg | 960 |
| aaacagagtc tctgttgccc aggctggagt gcagtggtgc gatcataggt cactgcagcc | 1020 |
| tcgacctcct gggcttaagt gatcctccca ccttggcctc ccgattagct gggactacag | 1080 |
| gtgtgtgccm ccacacctgg ccttttttt tttttaagag atgtagggct gggtgcagtg gctcactcct gtaatcctag cactttggga ggctgaggca ggcggatcat gaggtcagga | 1140 |
| gtttgagact agcatggcca atgtggtgaa atcccatctg tactaaaaat ttgaaaatta | 1200 |
| ggcacagtgg cttacgcttg taatcccaac actttgggag gcagaggtgg gtggatcatg | 1260 |
| aggtcaggag tgtgagacca gcctgaccaa catggtgaaa ccccgtctct actaaaaata | 1320 |
| caaaaattag ctgggcgtgg tggtgggctc gtgccgaatt cgatatcaag cttatcgata | 1380 1440 |
| ccgtcgacct cga | 1453 |
| | 1433 |
| <210> 970 | |
| <211> 775 | |
| <212> DNA | |
| <213> Homo sapiens | |
| .400. 000 | |
| <400> 970 | |
| gttggcttgt atttggggga gaccgattgt gtcagatatg tatgtggaac gtagctgtcc | 60 |
| ttgccgagtc tgacctgtat gaaatgcata tccatggcta tattattttg gatttatgga | 120 |
| ggaagcagag catttctgac acttaaggtt gtatgcgtga gggagaaggc tttcacagct | 180 |
| taacttgtac cagagcagct gcatgggtgc tgacagctta acttgaaatc tgtgggagga | 240 |
| aggateettt tteacteatt caacaaatat aaccatteaa tgaatggtee atgeettgag | 300 |
| gtgaggatca tcaaggtgtc tctgtaaata gcctggatgc aatctgaggg gagttgtttt | 360 |
| gacggtggta ggtattaagt tgagggaggc agtgtggaat taaaaccaga gaactgtttt | 420 |
| tgggtactgg taattgttaa tatatgtgcc tgtggatgtt ggaacttctt ggctgggctg | 480 |
| cactttggga ggccgaggtg ggcggatcac gaggtcagga gatcgaatca cgaggtcagg | 540 |
| agatcgagac tatcctggct aacaggatga aaccccgtct ctactaaaaa tacaaaaaat | 600 |
| tagccgggcg tggtggcggg cgcctgtagt cccagctact cggggaggct gaggcaggag | 660 720 |
| aatggcgtct cgtgccgaat tcgatatcaa gcttatcgat accgtcgacc tcgag | 720 |
| | 775 |
| <210> 971 | |
| <211> 824 | |
| <212> DNA | |
| <213> Homo sapiens | |
| .400 004 | |
| <400> 971 | |
| ggcacgaggt tctatcctct ctgcaatctt gtggctctcc caagatgcag gtgaggtggc | 60 |
| caccacagca tagaacttca ttaggcagcg agacgtccat gtctgtggca gaaacagccc | 120 |
| tgtgggaget gtatetatge teeegeeeae ttetgageet geetgagaga acagtgeeea | 180 |
| ccagagetet ettetecace agtgtgttge tgacaaaatg ggtgaaggea gaattcaace | 240 |
| ctggcctcag gcaaggcact tcctctacct ctgtttgtaa aatgggagta gacatctgtt | 300 |
| tctctcagct ctgtggcaga cactgagcta tcgaggcttt ctgtgtatgt tttttttgca aactctgcaa aggtgtgatt atacaattgt ttataaacaa taaaaccaaa gcatagaaat | 360 |
| ttaaaaaattt attaaaaatc atgcatctac tcaatgacag ggctcccatt tatacccaag | 420 |
| cagtetaact tittittec gagacggagt ctcatettge etcecagget ggagtgeaat | 480 |
| ggcacaatct caactctctg caacctctgc ctcctgagtt caagcgattc tcctgcctca | 540 |
| gcctcccaag tagctaggac tacaggcgca cgccaccacg cctggccaat tttttacatc | 600 |
| tttagtaaag acggggtttc accatgttgg tgagtctggt ctcgagctcc tgacctcgta | 660 720 |
| attigeceae ettiggeetee caaagtigga etacaggigt gagecacege accidente | 720 780 |
| gtgccgaatt cgatatcaag cttatcgata ccgtcgacct cgag | 780 824 |
| | 027 |

```
<210> 972
 <211> 1298
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> SITE
 <222> (1265)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (1292)
 <223> n equals a,t,g, or c
 <400> 972
 tttttttttt ttttttgagc agagaagtgt gaacatgact tgtaagtttt aatgtactag
                                                                        60
 acaagcaagg cggtagcact agttctctct tctgatcatg cggtaccttg ctctctgccc
                                                                       120
 ccatggatca cttactgcat tctgtactct agcactgtgt atgcatcact cttccttatg
                                                                       180
 ccccgtccac cccaccacct ggtctccaga ctcagcagaa cagaggtgac tgattccttg
                                                                       240
 gaggtagcac agaagggccc aaagtcctag atcctcaggg aaagaccaac tccaagtcca
                                                                       300
 gggaaaagct ctatgcaaag ggctgcccgt catctctgcc aaacttaagt ggcgtggctt
                                                                       360
 ttcttctgac cttaaagatg ttgttctggg taggggtgtc aatgcccaaa tggagcatgg
                                                                       420
 cctctctggt cacctcaaaa caatcctctt ctaagctcct ctctgggttg ggcagccagg
                                                                       480
 agaaggcagc teeeteagga aggtgeeact ggageetete gteeteactg geteetttge
                                                                       540
 aaatctgata gaagatgtgg aagttcctct cactggaasc ctggcaggcc actcgagttt
                                                                       600
 tetetaggag gtaggtetgg actgeggete cagteatttg etgageeetg tteagetgga
                                                                       660
gctggatgaa cttcccaaag cgactgctgt tgttattcct cagtgtacac gcattcccaa
                                                                       720
aagcttccat gacagggttg gagttcagga teetetgtte tateetetet geaatettgt
                                                                       780
ggctctccca agatgcaggt gaggtggcca ccacagcata gaacttcatt aggcagcgag
                                                                       840
acgtccatgt ctgtggcaga aacagccctg tgggagctgt atctatgctc ccgcccactt
                                                                       900
ctgagcctgc ctgagagaac agtgcccacc agagctctct tctccaccag tgtgttgctg
                                                                       960
acaaaatggg tgaaggcaga attcaaccct ggcctcaggc aaggcacttc ctctacctct
                                                                      1020
gtttgtaaaa tgggagtaga catctgtttc tctcagctct gtggcagaca ctgagctatc
                                                                      1080
gaggctttct gtgtatgttt tttttgcaaa ctctgcaaag gtgtgattat acaattgttt
                                                                      1140
ataaacaata aaaccaaagc atagaaattt aaaaattatt aaaaatcatg catctactca
                                                                      1200
atgacagggt cccatttata ccccagcagt ctaacttttt tttccgagag gagctcatct
                                                                      1260
tgctnccagc tggagtgcat ggcacatctc antctctg
                                                                      1298
<210> 973
<211> 1808
<212> DNA
<213> Homo sapiens
<400> 973
ggcacgaggg cccaactggg gtatctgccc agcccttccc tccagtgttc ctccctagca
                                                                       60
ttcaagtgct acccagcaga aatataatgc cagttctgca tctaatttta aatttcctaa
                                                                      120
tagccatgct aaaaaagtaa aaagaaacag ttgaaattaa ttttaataat gtatctcgcc
                                                                      180
caatatatcc aaactgttat ttcaacatgc aatttttgaa aaatgtgaga tgttttacat
                                                                      240
tctctttttc acacttagtc ttcaatatct ggtgtgtatt ttacacttct agcacctctc
                                                                      300
aattcacacc agccacattt aaaatgctca gtagccgcat gcagcttgtg cagccttact
                                                                      360
taggtccagt gtcagcctgg ggccgtgctg gggagctgag ctgtgtccat gggggccctg
                                                                      420
gtgagcctcc agtgctgtgc tgagggtaag ggcacccagc gcaagcccca gcgcagctgc
                                                                      480
ctgtccagcc ctgcctcagc tccttgcaca gaatgagctt gaagtgctcc cctctgctcg
                                                                      540
gttctagttc tgcctctgac agttttgctc tttggttcac aaggcttcct aaactcagga
                                                                      600
ttgctttgtg ggtctgttct ttgggatgag aggccagggc aggtgcaagc tatgccttca
                                                                      660
ctcctttgtc cctgccttcc tccttcctgt accccagcta cagccccgtt gggaagaatg
                                                                      720
tgtcgttagt cacaaagcat tgcagatgtg tctaagaaat gccacgctgg ggccgggcgt
                                                                      780
ggtgctcaca cctgtaatcc cagcacttcg agaggctgag gcaggcggat tgcctgagct
                                                                      840
caggatttca agaccaccct gggtaacatg gtgaaaccct gtctctacta aaaatacaaa
                                                                      900
```

| aaaattagct | gggtgtggtg | gtacacgcct | atagtccca | g ctacatggga | ggctgagcag | 960 |
|------------------------------|-------------|------------|------------|--------------|--------------|------|
| gagaatcgct | tgaaccggga | ggtggaggtt | gcagtaagc | gagattgcac | cactgcactc | 1020 |
| cagcctgggc | gacaagagcg | aaactccatc | tcaaaaaaaa | a aaaaaaaaa | aaaaaaaaac | 1080 |
| tattctgtat | aggtaatgaa | cgattttcaa | aaatcttaga | a tgaatcaatc | agataacagc | 1140 |
| caaacactca | ctcaactggc | atctactcaa | aaagctatto | gtttctcato | r attagetttg | 1200 |
| ccaaaccatc | tccctagatt | atttttcttt | ttaaatttca | a ctttgcattt | ggttaatcat | 1260 |
| tccctgggaa | agcacacggg | gcaggtgggc | ctccttgtct | tcactttqcc | attccctatc | 1320 |
| tgatgaattc | tgaacctcag | tttttcatcc | aagaactgga | a gttaaaacac | ctgcactatt | 1380 |
| atacagggcg | tgaggctgtt | gtcatgataa | tcaatgagct | gatgtgtggt | tgaagctctt | 1440 |
| atctgactcc | atagatagtt | ttaaactacc | taagtataaa | ttcagcagct | ttgcttaaga | 1500 |
| tttaaagcag | gtattataaa | tatgcattcc | tttgccaato | : ttttaataga | aggacaggcc | 1560 |
| tattcttttg | aagatggatc | tgctgatgag | agctcccctt | tgtctacttt | acatcaacca | 1620 |
| cacccttatt | tcattgtttt | gtgattccag | tgttggtttc | : tttaaagtaa | aggaagaatt | 1680 |
| tagatatttg | ccgagccatt | ctgaatatag | aaacttccta | ı gatcgcatat | cccttgatct | 1740 |
| tttatcgtta | attagatgag | agtaaatctc | gtgccgaatt | : cgatatcaag | cttatcgata | 1800 |
| ccgtcgac | | | | | | 1808 |
| <210> 974 | | | | | | |
| <211> 974 | | | | | | |
| <211> 1343 <212> DNA | | | | | | |
| <213> Homo | saniene | | | | | |
| 12137 1101110 | sapiens | | | | | |
| <400> 974 | | | | | | |
| ggcacgaggt | tacqatqaqq | cttgcaaata | atatettata | acctattatt | ttaaactcat | 60 |
| gacaacttaa | cagtgattgc | ataaacaaac | taacaagtaa | agagaaaact | ratasasart | 120 |
| ctacacttta | acatcatgcc | cctactttta | actttttott | gtttctactt | atatettatt | 180 |
| tgtactatgt | cttgaaaagt | tgtaattatt | atttttgatc | agttcatctt | ttagtcttcc | 240 |
| cactcaagat | atgagtagct | tacacaccac | aattacagtg | ttttgatatt | ctatctttt | 300 |
| gtgtacttac | tattactagt | gagttttgtg | ccttcggata | atttcttatt | ttttattaag | 360 |
| gtgcttttct | ttcagattaa | agaactccct | ttagctttct | cataggatag | atctaatatt | 420 |
| gatgaaatct | ctcagctttt | gtttgtctgg | gaaagtcttg | aattctcctt | catotttoaa | 480 |
| taatattttc | accagacata | ctattctgca | ataaaagttc | tttttccttt | ggcactttca | 540 |
| atatattatg | tcactctttc | ctggcctgca | aggcttccac | tgagaagtct | gctgctaggc | 600 |
| atattgaagc | tccactatat | gttatttgtt | tcttttctct | tcctactttt | agaatccttt | 660 |
| ctttattatt (| gacctttggg | agtttgatta | ttgaatgtct | tgagttaatg | ttatttgggt | 720 |
| caaatctgct | cagtaacctt | cttgcacttg | aatattgata | tctttctctt | ggtttgggaa | 780 |
| gttttctgtt a | attatccctt | tgaataaact | ttctaccctc | atctctcgat | tttctcttga | 840 |
| aggcccaaaa | ctcttagatt | tgcccttttg | aagttatttt | cttgatatcg | taggcatact | 900 |
| ttcattctct | tctattcttc | ttccttttgt | ctcctataac | tgtgtatttt | caaatagcct | 960 |
| gtcttcaaac 1 | cactaattc | tttcttctgc | ttgattaatt | ccactattaa | cagattctga | 1020 |
| tgtgttcttc a | agtatttcac | trgcagtttt | taactccaga | atttctactg | gattctttta | 1080 |
| aattatttca a | attteacette | caaacttate | tgataggatt | ctgaattcct | ctctgtgttc | 1140 |
| tcttgaattt d | teteteteee | attactore | gccattttga | attatctgtc | tgaaaggtca | 1200 |
| cacatctgtg t atatttcctg a | ataatatta | attagtcacc | ggrgacttat | ttagttcatt | tggtgaggtc | 1260 |
| tcgatatcaa g | acttatogat | accotcoac | acycccatty | gagtetgget | cgtgccgaat | 1320 |
| | joodacogac | accyccyac | | | | 1349 |
| <210> 975 | | | | | | ` |
| <211> 1953 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo s | sapiens | | | | | |
| | | | | | | |
| <400> 975 | | | | | | |
| ggcacgaggc a | aatctgagt | tttaatgaac | actgccattg | attctgatca | tgctgaagtt | 60 |
| tagaaaccac t | ggtttgatg | cttatttgca | ctattatact | gtggtttaca | tatgggcttg | 120 |
| acaggtccat t | tactttcat | ttacttgcta | tttgagattt | tgtctggcca | gacaactgag | 180 |
| cctcagataa a | ittattttct | tactaaattc | tggtaaatac | caataaaacc | ttgaatacaa | 240 |
| ccaacatagg a | cagtcagtt | ctgctataat | gatttttaaa | atgggaattt | gtttcaatgc | 300 |
| aattaatata t | rgggaaaca | aatttagcat | arggcaaatt | tkgcawttat | ttgtgcacya | 360 |
| cttcatmtgc t | agaccaact | aggtgaatgt | aggaaccata | cacagctgag | ctgagtctca | 420 |
| taggaacaca t | adaacacac | acacacctct | caaggacaat | cagtggccca | gacccatgca | 480 |
| | | | | | | |

```
catctactat tacccttytt gtcmtttccc ccttyactgt tattaataca agctgcaagt
                                                                      540
cttccacaaa ctaacttcag gtggttttca agataaagtg ccatattgct tgcagtattt
                                                                      600
atgtattttt taatcattta atgaatgtaa aactatgcta ccatttatta gctgcttctt
                                                                      660
tttaaaaatg ttccactgac aaatgttttg agtattatgc cccgaggcct atgattttta
                                                                      720
ttgtgttctt ttgcattgca cagagaattt tagcaatccc tatgttgcac taaagcagaa
                                                                      780
ttgagactaa tttgagcaaa acttagcaac ttataactgt tacaatcctt atttcagggc
                                                                      840
aaacttttca ttttataatc ataattattt tgtttcctct tgagtagcac acacacac
                                                                      900
acacacaaat ctaaggtgtt cactatcaca gaataatagc ctttaaaatg tttaccagtt
                                                                      960
ttcatattga tatattttgt ttgactctgt cattccgggc tttaagtact aaaatatatt
                                                                     1020
agtcttttc agaaaacatt ccaagaaaaa agttgaattc ctacctagtt tcctctct
                                                                     1080
ttgataacct attgtcatag taatatacaa atacctgaaa attgcccaga ttattctttt
                                                                     1140
cttcttggaa cacagatttg ttgataagtg ccaaaggatt ttttacaaaa acatgagaag
                                                                     1200
tttgacatca cagtaagatt taaaaggaaa ggctgtttat tgktattatc atcattgcta
                                                                     1260
ctactatttc cgttagtata tatttctttg tcttatttgt ccttttccaa aagatttttg
                                                                     1320
ttcttatatt tttaattagc tctttaaaga aatcaagaac tgcttgttga ttatagacat
                                                                     1380
ccttattgta taaagaggga gaagttcttt ggtaattagc tgtgtatagg ttctgttcaa
                                                                     1440
acaattggct caagtgaggt tgtacagaaa gaactcttgt attttcttat ttttcagtat
                                                                     1500
attctccact ccatcacacc tctttttcca aagatgcagt gsaaagaaag tataatctct
                                                                     1560
ggagtaatta aagctcagtg aggaaatgat atcacctgat ggccctatga agcattcagc
                                                                     1620
aataaaaggt gagttgccca aaatgcattt accctgaaca ggaatacaat gaaactacca
                                                                     1680
agttttatct ttataatgat tcgtggctta ttattttgtt gtttgtatat gttctgtttc
                                                                     1740
ccacatcagt gttgtcttac attattatct gtcttaactt agactctgtt ttctaaattg
                                                                     1800
ctctgtgcaa ttaaatgctt tgtgatcata ataaaaagca tcatgataac ttttagacta
                                                                     1860
gaggtttcca tacaaagctg tatcccatgg agagcagcta ctggctcgtg ccgaattcga
                                                                     1920
tatcaagctt atcgataccg tcgacctcga ggg
                                                                     1953
<210> 976
<211> 1632
<212> DNA
<213> Homo sapiens
```

<400> 976 gaatatatgt gatttctcct ttgacctgta ggttatttag aagtgcattt ttagaaggat 60 gagattttct aaaaatgtta tttgggtgca taattttatt ctgttgtggt cagacaatag 120 tccctgtgaa atttcagcct tttgaaattc attaggaatc attttaagga ccagtatatg 180 gtctgaattg gtgaaaattc catgagaatt tgaaaagaaa aaagtgaaat ctgcagtttt 240 tgagtataat atctataaat gtcaccaaag tcaagttggc tgataatttg ttctgggtat 300 ttctatcctt cttggttttt aaaatcaggg ttgttctagc aattgctgag agagtactat 360 tcaattttct agacatgaca gaaattttca atctctctta tttttgtcag tttttgcttt 420 ctataatttt caactttaat taggcgcata acgtgtcatt gtatctttca gatgggctga 480 cctttttatc gtcatgaatt ttgaattttt ttcctaatta gcttcgggat gccagggtat 540 atgatgggtc aagaacatga cgtttcaaat ttttcagtaa tcataactct aaagtaatgt 600 gtaactctaa aataatttat tttatttaat catcttttat cttattaatc aattgatttg 660 ttcccacaat tacttacgtg tactttagac cattcctgga ttgacagtaa aagggagcac 720 atgacaaatt cttagtttta gagcatgggc tgcacaatcc tgagcccagc ctggtggtga 780 tgaaattaag cccagtacta agagcgtaaa tgaagaagaa actcagtagt aagagagtgt 840 ggaccaactg gtcagatgct ctaatcagca actctcattc cactgtcaaa accttggaga 900 ttttgtatgt tttttaaata ggtgaagtga atcaagtggt gcctaccaaa tttattttgt 960 cctctgcatc agtgcgtggc atacaacatt aacaatgaga agcaactaac tcctataagc 1020 tattttgggg gaatagagga tggtacaaat atcacaactt tacagcaaat attacaactc 1080 cttcaaaaca cagtttggca gtttttaaaa aaataaaaat aaaagagttg atcaagctgg 1140 gtacagtggc acacacctgt aatctcagca ctttgggaga ctgaggtggg atgatcactt 1200 gagcccagga gtttgagact agagtgagct atgattgcgt cactgcactc cagcctgggt 1260 gatagagtga gacccagtct ctaagaagta aaaatgaaag aaagaaaaaa agttggacag 1320 gcacctgcca catctcattt attccactcc aggtatttaa ccaaaataaa taaaaatgta 1380 tgtccataga aagatttaca catgaatgcc cacagcaact ttattcatag tactccaaac 1440 tggtgacaac ccaaatttcc atcaacagat agataaacta atgatggtat atccatataa 1500 taaatactgt ttaataataa taaataatga actattgatg tatacagcat cttggataaa 1560 tctcaaaata attatgatga ctgaactcgt gccgaattcg atatcaagct tatcgatacc 1620 gtcgacctcg ag 1632

<211> 1230

```
<210> 977
<211> 1363
<212> DNA
<213> Homo sapiens
<400> 977
ggcacgaggt ctcgctctgt tgccagcctg gagtgcagtg atgcgatctc ggcttactgc
                                                                       60
aacctctgct tcctgggttc aagtgattct cctgtttcag cctcccaagt agctgggatt
                                                                      120
acaggcgcct gccaccatgc ccggccaatt ttttttttgt atttttagta gagacggggc
                                                                      180
ttcaccatgt tggccaggct ggtctcaaac tcctgacctt gkgatctgtc cmcctcwscc
                                                                      240
tccgawagtg ctgggactac aggcatgatc caccgtgtcc agcctctata ccaacaattc
                                                                      300
tatattctac tttgtgatac tagagctggg actcgctaga cttgtggctc tcctgggatc
                                                                      360
cctgagctcc ttgcaggaga tttttaaggt caaaataatt ttcataacgg tattaagata
                                                                      420
                                                                      480
ttatttgctt ttcttactct tattctcttt tgaatgtaca gtgaagtttt caagaggcta
                                                                      540
tatgacatat gatccagtaa cagaaacata gcaccagata taatttaccc agctgtcttc
catgaagcca ggcattaaag agatttgcaa ttatgcaaaa caatgctacc cttcttacta
                                                                      600
                                                                      660
ttttttgttt gtttttgaaa atagttattt ttcataataa tgggttattt tttgttaaca
                                                                      720
ggtagtggtt tgattcttgt tatttttgga atgtcccatc tttaatatgg caaatatcaa
                                                                      780
tagatatcat ccacattaac ataagttcct tcaggtcttc aatttttaag agttcacaga
                                                                      840
gtcctgtgat caaagagtga gaaacactgc tgcagacatt cttcattgcc agtggattcc
tgttctatcc attagaggcc gctagagaga gacgagaagg cacaggggtt ggggcggtgg
                                                                      900
                                                                      960
ggtggggagt cgcgggagaa ggggctggac ccacaagaga acctgctgct cctgttgaat
                                                                     1020
ctctgcagcg tttcagcccg gtggcggtag catgttgtct ctacctgcag actctaaagc
                                                                     1080
agtgtaggct ctagtctcta gctcatgtcc acaccaacaa aagcacaatg agctccctgc
taagcaatct gggacaggcc acggtgatgc accetectca gaggtetgag tteetggget
                                                                     1140
atagactagt cttgaattcc ccagttacca gaggcagcca ggaagtatca cttccacaaa
                                                                     1200
agtccaaggg ctaggtttgc taggcaaccc ctcacctcag aatttcatcc tagctccaag
                                                                     1260
gaatcettte eteagggett etaggtggtg attactgeea tetaagggea geacatgttt
                                                                     1320
cctcgtgccg aattcgatat caagcttatc gataccgtcg acc
                                                                     1363
<210> 978
<211> 1302
<212> DNA
<213> Homo sapiens
<400> 978
aggattegge aegageeaca agtggeeeet ceteeteea catggeteet egteeteate
                                                                       60
ttcttacagt cctcttgctc ctcccactgg gactgaaccc aaaggcatct cttcaatggg
                                                                      120
gtggtccctg cctagggaaa gccggtgcct ccagcccttt agtgcccctt ctgttatggc
                                                                      180
gtgtctcctg tgaagtctct gtcatcccca aggtcaagtt tgctgggctc aatgattctg
                                                                      240
tgtgccctgc atcactttgc tagcaggaca gggattggcc tccagtcttc agtccctcat
                                                                      300
ccccaaagcc cagactagaa cttcacagat ggacctgggg cccctcccgg agccgggctt
                                                                      360
tetggagtgt teteatttge taacatetge etceetegge aacettteet etgtaatgga
                                                                      420
acaggtccag aagagccatg tgggctgaca cagtaaggcc tccaggcatc tgtgccgtga
                                                                      480
cgtgagcaaa gtgtgagctg catggtggga tatgccatgc cttgcctagg ggcccgggca
                                                                      540
ctgccatcac agggaggctt ggccaccaac cgacatggct gccccaggtg ggaagggtcg
                                                                      600
gatggaggac tctgccaccc actcttggga aacaccccca aaatgaacga aggaatgacc
                                                                      660
totgtootgt tttagcatco ogggagacac actgtggcot aggatcotgc ocggotgcag
                                                                      720
ggctctggat ggggcgtgac atcctgcccc cgagggtgtg gcggggagtc gatgtcacac
                                                                      780
                                                                      840
agctgagcca cagggcccag ggatgtggtg aaagctttcc ccaggtccca agtgcccaca
                                                                      900
gcccctgccc catccaagac ccagaaatgc agctcactct aacccttcag tgcgggcccg
ctctcaagcc tgtccgtcac ctcccagaac tcccacgttc ccaaaaccct gtgttcccag
                                                                      960
tctctttggt ctccagaact gtcattaaag aaagaagggg ctaggcacag tggctcgtgc
                                                                     1020
ctgtcatccc agcactttgg gaggccgagg caggtggatc acctgaggtc agtttgagac
                                                                     1080
cagcctgggc aacatggtga aaccccatct ctactaaaaa tacaaaaatt agctgggtgt
                                                                     1140
ggtggcgggt gcctgtaatc ccagctactc aggaggctga ggcaggagaa ttgcttgaac
                                                                     1200
ccgggaggca gaggttgcag tgagccaaga tcaagtccat tgcactctag tcccggctcg
                                                                     1260
tgccgaattc gatatcaagc ttatcgatac cgtcgacctc ga
                                                                     1302
<210> 979
```

```
<212> DNA
 <213> Homo sapiens
 <400> 979
 ggcacgaggt cgattctgag acccgatacc ctgcgagggg agtgcaggat aagcaggaga
                                                                        60
 aattaattag cgctgcctta agcagtttta ccgacgcagg cgggactgtg gtggagcact
                                                                       120
 ggagatgctg cgagccctga gctgccttca cagccttgtt gggtgtgctg ctggatcaca
                                                                       180
 ctgcatgaga aatggaagca acctatctgt aaagagcctg caaacctcag gacgctctgg
                                                                       240
aagccagtgg aataattaca gtgggatgag gctgcaagtc cccttgcttc ctgagctgca
                                                                       300
 ttcacggctg tgtgaagggg agaaaggaat acatttgagg tcttttcatg gaagacacag
                                                                       360
atattttaat gttgcgatac catccaacag ggtgagctga gagaaccaac actaagagtt
                                                                       420
tcacagatag aacaccacta tyccctgtgt aaaacaggag gtaggcaggc gtaggcctcc
                                                                       480
cctggaaaac aatgttttaa gagctcataa atacctwgag gtcaaatcat cctcgtttct
                                                                       540
agtgtttgta tagttatttc caataatata tttagtgggc tcactttttt attttgtgca
                                                                       600
tttatcctgg tttattgttt atttttcctg aattattggc caatgaatat ttatattaga
                                                                       660
acagaaaaaa atatattcta aaattaatgt cataaaaata agttacatca gttagatgtc
                                                                       720
ctctgcatga gaaagggata agatggattg ctaaatatcc cctggggctg agccagcaag
                                                                       780
actaggactg cacacccctc atcattagca aggacacaaa atcacggagg agacccagtt
                                                                       840
ggccagggca gaccagccag gcagtgctgt gtcaaacgca tgatgaatgt ggtggatgca
                                                                       900
ttgagctctc ttcccagctg aggagttaaa gagaaacatt tagtaaaaag ggccaggatt
                                                                       960
tagtcacaat gctaccctct cccgatagaa taattaagca atgaacacag ctgcacattt
                                                                      1020
ctggaatgga cactgcgaga aaggtgtagt ttttccatgt tgtatggcat ttgtttctt
                                                                      1080
gcaaacaggc aagcacggc taggactgtt tctacgcctg tctgcactgt gatatgcact
                                                                      1140
gtcttcgctg cagaagagca ccacaatgct gccttcatat tccctcgtgc cgaattcgat
                                                                      1200
atcaagctta tcgataccgt cgacctcgag
                                                                      1230
<210> 980
<211> 361
<212> DNA
<213> Homo sapiens
<400> 980
gggatcgcct agcaacactc tagcctgggt aaaagagtga gactctgtct cttaaaataa
                                                                       60
ataaacgcat aaaaaataac ccttgtcaca taaaaatgat catctcattg tgtcttataa
                                                                      120
tattttattt ttagaatcag gcaaagggat tctagggatg ggcctgaaag gggcagctct
                                                                      180
gtgcttgttt attacatggg tacactgcat actggtggtg actgggtttc cagtgtactc
                                                                      240
atcacccaca cagtgaacat cgtcccagca cgtaattttt caagcctttt gcctctccca
                                                                      300
cctcctctct cttggagtcc ctcgtgccga attcgatatc aagcttatcg ataccgtcga
                                                                      360
                                                                      361
<210> 981
<211> 1603
<212> DNA
<213> Homo sapiens
<400> 981
ggcacgagca ccacgcccag ctaatttttt tgtattttta gtagagatgg ggtttcactg
                                                                       60
tgttagccag gatgatctcg atctcctgac ctcgtgatcc gcctgccttg gcctcccaaa
                                                                      120
gtgctgggat tacaggcgtg aggctgcaaa actctcttat ctcccatttc cccagtggca
                                                                      180
aaacaggtca ccaggcatag agagatggga ggctgcctga gagagaggga ggagagctta
                                                                      240
tggaaattgg ctttttcctc ctcttcttcc tgctcaggta cacagctaat cctgagacaa
                                                                      300
caacattttt aaattcctct tctctcgctg tgcaaacaat tttctgcttc caaatgtaac
                                                                      360
tctggttaaa aactacagac atgcaggtgc aattgtagac aggtttgtgg tgaaagtcaa
                                                                      420
gttcatacat atttgcctat taagacagga cccttaaatc tccaagctgg ggggaaagga
                                                                      480
agttaagtct tagaatgcac atgtacaaac ttccctgtat aactgagatt ttctgtagct
                                                                      540
ctggttttta tttatggatt tctgcagttc actttgacgg ggagggatta tttttctctc
                                                                      600
tgccgactcc agctgattga ttcaatgcgc ctgctcactt tcagatatgg ccgcagaagc
                                                                      660
tgcggcataa ctttgtgtct gtatttaaaa ttgggaatac aaaatgggtt taaacttgaa
                                                                      720
tatttcatcg agacactacg ttttataagt aatttatttt ggaaatccag gcgtctgcct
                                                                      780
gggctgtgta gattttgagc gacttgggat gctcagagtt acttctgaat attaatatca
                                                                      840
tttgggccgt acacactctg agatttcata taaccttatc actgctagat acttaaatag
                                                                      900
```

| ccatgaaggg gataaagcaa acactttcct caacatttat atcaggatat tggct | ttcca 960 |
|---|--------------------------|
| tatgatgact ttaactaata taatctcagg caagacaaac agcaacattt acagt | gaaag 1020 |
| acaactctgt taatcacaaa agatgttgga tgcaagactt aatcattttt aggac | catgg 1020 |
| aagttatgtg tgcaaagtaa atgtagattt ttcttttctc gccagctcac acaat | aaata 1140 |
| tttcctcaat ttcttgaaga tggaagcttc agaagtctgg tttagcaaag acttag | adata 1140 |
| ggccaattcc atttctcatg agtacatcct gtttagaggg ggaagctcat caagt | gccat 1200 tctga 1260 |
| aaaaaaaaa agaaaaaggg ctgggtgctg tggctcatgg ctgtaatctc agcac | tttaa 1200 |
| gaggetgagg egggtggate acetgaggtt aggagtttge gaceageetg aceaac | tttgg 1320 |
| tccaccatct ctataaagaa tacaaaaatt agctgggaat gatggcagat gccta | catgg 1380 |
| ccagctactt aggaggctga agtgggagac ttgcttgaac ccaggaggca caggt | taatc 1440 |
| tgagccgagg tcacaccatc gcactccagc ctgggcaaca cggtgagact ctgtct | tgcag 1500 |
| tgccgaattc gatatcaagc ttatcgatac cgtcgacctc gag | |
| 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 | 1603 |
| <210> 982 | |
| <211> 1647 | |
| <212> DNA | |
| <213> Homo sapiens | |
| | |
| <400> 982 | |
| tgttctatga gcctcttgtc tgcctcattt ttaaagtgtc tttatcataa atcgtt | |
| ttaacaaata tgtttctgaa tcgattgaaa ctattatatg ggttttggct tataat | attt 60 |
| aatacggtga attatacaag gcaaccaact aggagttagg atctgcttca cagctg | tatt 120 |
| cccaggtaaa ttatctcagg gccaagcata gtttggaatc actaggctta actctc | ittta 180 |
| tttcccttgt ctcccaaaga tttctcagcc tgcggcaagt tttttggata catcta | cagg 240 itgat 300 |
| ttttaaaaat attgtatctt ctttattctc agcagcaggg taggtaggag ttacct | agtc 360 |
| catgttatca aatggaactg ataacagttc cattgataac acaaggccca caaatc | aaaa 420 |
| gatataaaga gttatatagt gagaagctct ttataccttt tgatttgtgg gccttg | tgaa 480 |
| tgcctcactt atataaaaat aaagataatg tgaaaccatt tgaaaactgg aatgaa | atga 540 |
| atatattcct agamcaatat aaatgataag gattgagtca taaagcaaat taaaaa | aaaa 600 |
| aamaacaatg agactgaaag aaggtgaatt ggtaaccaaa agccttctcc caaaag | acac 660 |
| caggcacaga tggttttaca caaaagcttc atttcagaga atagaaaaat atacaa | atta 720 |
| yytcggagaa tataaaaaga aaaaaaatcc aatttatttt acaaawtgta ttagtt | aggt 780 |
| tttgcttcac tcatgtcatg taacaaataa tgccaaatct cagtaactta caacac | ttct 840 |
| cactccattg tctgtggatc tctgtaacca tgtagttata tcaatcaata tagaaa | atgt 900 |
| acttaataaa attgaacact cactcatgtt aaacaaaaca | ggta 960 |
| ctagaaggta acatgaaaag agacatcttt ctaaaaccta tagcaatcat tatagt | taat 1020 |
| attgaagtat gagagatttt ccattaaaac caggatcaaa tcaagaatgt ccataa | taat 1020 |
| ggtttctatt caaactgtcc tggttgtgtc cttcccaggg taggttggga ggtagg | aaga 1140 |
| tgaagaattc tttgatgaca ttaattttcc ccattaagca tgaggcaatg ttatca | gctg 1200 |
| aacatgggtg ggaagctgtc agaggtttgg taagaaggga aggtattgac taagca | tctt 1260 |
| gtagagtggg agagcaaact tattcgggaa ccatccaagg attgtgagaa aaagtt | aaat 1320 |
| gtccactgtg tttggtgatc atgaatggaa gaggaaacct ataagagttt atgact | ttcg 1380 |
| gctgggcgtg gtggctcacg cctgtaatcc caggacttcg ggaggccaag gtgagt | ggat 1440 |
| cacgaggcaa ggaattcaag ataagcctga ccaacaaggt gaaacctgtc tgtacta | aaaa 1500 |
| atacaaacat tagccgagta tggtggcacg tgcctgtagt cccagctact cgagag | acta 1560 |
| aggcagaaga attgcttgaa cccaggaggc ggaggttgca gctcgtgccg aattcg | atat 1620 |
| caagettate gatacegteg acetega | 1647 |
| | 1017 |
| <210> 983 | |
| <211> 1497 | |
| <212> DNA | |
| <213> Homo sapiens | |
| | |
| <400> 983 | |
| gattcggcac gagcactatt agattcatca tgaatgatct aaaggggtta ggatagg | gata 60 |
| ggactactaa gtagtggatt cagagaaaca ggtttcactt caacatctga tggacct | ttc 120 |
| tcacagtaag agtcctccaa agaaggggtt ggctgccctt aagtgttccc catcatt | gga 180 |
| aaattcaaac atggcttggc tagctgcttg gtaaggatgt tgcagaagga agtcagg | rcag 240 |
| cagattitga tigicitgat gactittaag gscacttaca tiagggagic tytatit | tct 300 |
| acctititica ggcagaatet ectetigagi tiacacaata titateaagi etterer | rgga 360 |
| atggaaggag agaagtcaaa gttaaccctg ttaaacatat tctagacaat catttta | ctt 420 |
| | - 220 |

```
tcttggaagg atttttagga cagagagatt cttcccatct tgtgcttgtt ctaactacat
                                                                      480
 taactattag tactgcattg atggctgact tactgggaag actgcttgga aaaatacaag
                                                                      540
 aagccattgt gggaaagtgt attctccaaa agaattccaa atgaatgaag ttgtttggat
                                                                      600
 tttgtctgag tgcaggttta tacacacatg catttatgta tttcctgaat ctttttggga
                                                                      660
 tataagataa gtttttccas agaaagcttt gctctgtgca taagcagaag agaagaacat
                                                                      720
 gaggaaagca caagagtgta gggacaagaa mctggccata ctcaaaagga actgaakgaa
                                                                      780
 gtccacatga ctgggcagga aatggggctg acactgctgt tatttggcgt ctttctttcc
                                                                      840
 900
 tcaacactga cccctctgac atcatctggt gggctgggaa taatttctga aatagtgtac
                                                                      960
 caaacatgtg cagacaatta tgtctgatga cataagccca ccacaaaaac tgggcctgaa
                                                                     1020
 aatgccactt gaaagartct ctcactttgc attaattttt ttttccatga actgtggtta
                                                                     1080
 ttttatttct gggtctttaa tatgcagggt aaatgaatca aaggctgatc gtgatatgtt
                                                                     1140
 cttttgatat cagttttaaa ttgtgccacc tgcaggaggc taagcttgtt atagtgagat
                                                                     1200
gtatttttag atggtggtat tcgatgctaa gacatgtgtg tatagagcag gacaatract
                                                                     1260
gccagcagra ragagagag aggggagaca agaagagaca aggacaggaa tgaaagcttt
                                                                     1320
gagccaagaa atgaaaataa acagttccta accccaaagc tgcagtggaa ttcccagctg
                                                                     1380
ggctctggat tgtgtttgat tcggtggagg acattttctg ggcagcgttt atctgctccc
                                                                     1440
ctggctgggc tctcgtgccg aattcgatat caagcttatc gataccgtcg acctcga
                                                                     1497
<210> 984
<211> 1566
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1068)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1100)
<223> n equals a,t,g, or c
<400> 984
gaattcggca cgaggctttt acttctgcac ctcctgccat gttttccctt agacttgcta
                                                                      60
tattctctgc ttatgaatct cttgccaggt cctctctgag agtggctgca tcctgcacaa
                                                                     120
acatacctac ttctgaatcc tatcctaggc tgaatacccc ttccaccctt tcacttcatg
                                                                     180
tcagtatttt tctagacttg ttgtactctc caacaatcca ctttgtgcca tgtcttccct
                                                                     240
gaagttggct gcgccctccc ataattactc aatcctgtat acccaccacc cccacccag
                                                                     300
gatgaattct gaggtagaat gtatgccatt cacatccgtg cacatcctgc cagattttct
                                                                     360
cctaggatgt ctgcacactt cactcacgtt ccttttactg aatcttcccc tatgcatggt
                                                                     420
actccttcca ccattcaacc gcctggatgt cctcacatct gcttactgca tcctgcatcc
                                                                     480
acacacctcc tgccaagtct tcccttacac tggcagcatc ctccactcat gaacttcagg
                                                                     540
ccaggttett ccatatgatg getgeattgt caacaatgta cetettetea agteeteeet
                                                                     600
tagactagac attaccyttt cccttgcact gcatactagt cattctctag gctccctgca
                                                                     660
ccctccacat atacacattc tgctgcagat agcgttatgt tgataatctc accacccaca
                                                                     720
catgttctgc catgccctct tcactargct aratgctccc tcctcccatg cacatcatgc
                                                                     780
tgaattatca aatttggctc cattaccaac ccttgaaatt aacatttaac cctccaatag
                                                                     840
tttagataca aagaatatcc ttgcattttt tgctagaaac cctcctactc cagcttcact
                                                                     900
ctctgttgat gcacttccta caggtttctc tgtgaggcta gcttcacatt tcctcatgca
                                                                     960
aatccagcaa tgtccaactg acaatgcaat tactgctagt tagttcccag actggctaca
                                                                    1020
ccctccgaac catgcacttc ttggtgcacc aaamttcagg ctggcctnac tcttaagctt
                                                                   1080
cctgatgggt cctccccgan gctggtgcat gctgtagtca taattttcct gactactctc
                                                                   1140
cctttgactt gctgaaaatg ccacaaatgc acttaggact gagtactccc ttagcctgga
                                                                   1200
teteceteae teacagaatt ettgecatgt cettgettag getttaceet etectaaace
                                                                   1260
ccctaaacct cctatggggt tcccccctag gctgcctttt cctacctcag ttgcacctcc
                                                                   1320
tgagtgcctt actatagtgt gtacatatgc acggagtgca cacatacata tagcacctga
                                                                   1380
tgggacctcc actagcctgg atgttccctc tacatgccat atcctccttt atactgcgag
                                                                   1440
tttcctacac cctttcattc cagccagaat gtatttatta taaactcata aacctactcc
                                                                   1500
aatgttattc cataagcttt ctcgtgccga attcgatatc aagcttatcg ataccgtcga
                                                                   1560
```

```
cctcga
                                                                     1566
<210> 985
<211> 1782
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1638)
<223> n equals a,t,g, or c
<400> 985
ggcacgaggt ggtggtgggt gcctgtaatc ccagctactc aggaggctga ggcaggagaa
                                                                      60
ttgcctgaac ccagaaggta gaggttgcag cgagccgaga atgcaccact gcactccagc
                                                                     120
ctgggtgaca gagcgagact ccatcccaaa aaacaaaaaa caaaaaacaa aaaaaaaccc
                                                                     180
aactttttat gattttagtc ttttacaatt tattgagacc tgtcttttgg cctaacatgt
                                                                     240
ggcctactgt ggagaatgtt tcatgtacac ttgagaagaa tgtgtatttc cactgttgtc
                                                                     300
aggtggatgc ttctgtacgt gtccgtccaa accccatgtt tattaatctt ctgtgtagac
                                                                     360
gtcctgctta ctattgaaag tggttcattc cagcctccag ctatgattag agctacccct
                                                                     420
tactttctcc aattccatca atggttgctt cacatatttt gggactctgt ttttgatttt
                                                                     480
ggtacatata tatttaaaat cattgtatct ccttgttgaa ttgacccttc tgtcaatata
                                                                     540
taaatagcct ctgtccttca ttttcttaat tattgtcttt tttgtggatt tttttggagt
                                                                     600
taactgtttt gatttccctt ttatttcctg ttgcgtatat attttaaaat actttctttg
                                                                     660
aagataaatt tataatatta ggattaaaca tagaacccta gatttataac agctcccttc
                                                                     720
780
gtagcccagg ctggtataca gtggttcaaa tgattctcct gcctcagcct cccaagtarm
                                                                     840
wrrgactaca ggcaaccaac accacaccg gctaatcttt gtgtttttag taaagatggg
                                                                     900
ttttcaccat gttggctagg ctggtcttga actcctgacc tcaagaaatc tgcccgcctt
                                                                     960
ggcctcccaa agtgctggga ttacaggcgt cagccacggc gcccggcctg tcacaggttt
                                                                    1020
cacctttaca cattgagtgc acggtaacat agacgtacac ttatctttta tgcattcatc
                                                                    1080
ttttaatttc tgtagcaaca aaggtggagt tacaaaccaa atacataatc ttgttggttt
                                                                    1140
tectggtegt ecetgtatte accategetg aagacettte actteatata getttgaget
                                                                    1200
aatgccgctg tccttttatg tcaatctgca aggttccctt tcgcattctt gtagagcaag
                                                                    1260
teteaagtte egittateir ggaatgiett aewieeteet teatigigaa ggatagiitt
                                                                    1320
actgactata aacttettaa aatttttttt tetttaggaa etttateate eeattetett
                                                                    1380
ttgtcttcca tggtttctag agaaatcaag agataagctt tttctggaaa ataaataatc
                                                                    1440
atccettgtg tgtgatgagt cacttetett etgetgettt tgggatttte tetttatece
                                                                    1500
teactggttt gattataaca tgtettttge aaatetette atgtttatet gaettgaagt
                                                                    1560
tcattatgct tcttggattt gtatattcac atctttcctc aaattttgga tgtttttggc
                                                                    1620
ttttatttct ccaaatantc tttcttttca tttcgttctc ttttcccttt tcggagactc
                                                                    1680
ttgtaatgtg taggctgatc agcccgatga tgttccacag accctcaagt ttcggctcgt
                                                                    1740
gccgaattcg atatcaagct tatcgatacc gtcgacctcg ag
                                                                    1782
<210> 986
<211> 1406
<212> DNA
<213> Homo sapiens
<400> 986
ggcacgagca ccactatetg tttetteeet ttttecacaa ttggaactgg teatgeacee
                                                                      60
acccagtcag ggaatacatt tctgagcttc tatgtcaatt atgtgtgacc acaagactag
                                                                     120
gttttcactt ctagagtatg aatggcaatc atgcatggat ttcttgggct ttctctatgc
                                                                     180
tettettece etetecaeta eetggaatet atageaaaet gaettaeaat teagagaatt
                                                                     240
agaatgtcct agagaaagga ggagcaccaa tgagaggaac cttgatcact taaaacctat
                                                                     300
gtagagcaag gactttcccc aacttaaaac actataatgt tgaatcttcc ttaagccact
                                                                     360
gaattatcaa tggatgtcat tttcatagca ggctactctt atcctaacta aagtaatggt
                                                                     420
tttatacaat atactttggc atcagaatga tttagttggt aaaacattgg atcttgggtc
                                                                     480
aaaaactcta gggtactttg ataaactctg ccccaatttt ctgagttggt cggaggcttg
                                                                     540
ttacttacag taactgtgat tttattttcc tagataaaaa tatacaactc caggtaggcg
                                                                     600
aaacaggaat ttctaacact gacctttcta attcctaatt ctcccaagta agagggctac
                                                                     660
```

```
aataaccggt gattgcccta ggcatgtgtc attttagtcc caagaaatgc ttgtatacca
                                                                       720
acatactgcc ttagggtaat gtaatgggaa aataatcaag gtgagttttt ggcatctgga
                                                                       780
cagccacgga tagctttccc atgaaagggc aaatatactc cattttgaga caattagaac
                                                                       840
aaaattgggg gagacgattt tagttacatt ctgtatatac attcaatgat ggcagccagt
                                                                       900
aagtcctaaa cttcagtgtg tatgaaggga acttgttaat catgcaaatt tgaggactct
                                                                      960
cccacgtgcc ccagagatca tacttcggtg gaactagagt tgaccctata atctcaaggt
                                                                      1020
taaatattac tttaagtgat tcttttttt tttttcttt gagaaggagt gtctgtcacc
                                                                      1080
caggctggag tgcagtggcg ccatctcagc tcactgcaat ctctgcctcc cgggttcaag
                                                                      1140
tgattctcct gcctcagcct cctgagcagc tgggactaca ggtgcttgcc accacgccag
                                                                      1200
gctaattttt tgtgttttca gtagaggcgg ggtttcactg tgttagccag gatggtcgtg
                                                                      1260
atctcctgcc ctcgtgatct gcccgcctca gtctccgaaa gtgttgggat tacaggcatg
                                                                      1320
agccaccatg cctggcctaa gtgattctta gatagtgacc tcgtgccgaa ttcgatatca
                                                                      1380
agcttatcga taccgtcgac ctcgag
                                                                     1406
<210> 987
<211> 1311
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1301)
<223> n equals a,t,g, or c
<400> 987
attcgggccg agatcagagg ttcaagccat ggctggagca gccacccctg aagtagacac
                                                                       60
cctaatatcc ttcccactga gttcctagtt ctacatgctg gagtgaggct gtcaactctg
                                                                      120
aagtgtcaga gtgtgtctga aaatgattgc tgtgaaaaat aaaatatttc acattgcagg
                                                                      180
cctcattttt aagttatttt tcccagagaa cattttcata ttttagaact tatggtaatg
                                                                      240
ttaacacttt ctatttgcat aagcacttcc ctgttgggag atactgcagg tgtaagtttt
                                                                      300
tctgaggagt gtcataccac catggaacta ttttccatcg atctggagat agggaacttc
                                                                      360
ttgtatactc tgagagagaa cttctttgag atgtaaacta gactgaccta ctttagaggc
                                                                      420
tgcctgtatc ctaattttct gttttaaaag agtgatggct gaacactgaa aagctcggga
                                                                      480
cattttagaa ctgtgctgcc caatatggtg gccactagcc atatgtggct atttaagttt
                                                                      540
aaattgaatt aaaataaaat gaagtggaaa aaattaagtt catcaattat attagccaca
                                                                      600
tgtaactgat gactagtggc tacctaccat atatagaaca tttctattat tgcacattat
                                                                      660
tctactggac aatgctgttt taggatgtag aagtcctgat ggataatatc aaagccacct
                                                                      720
taccacagac agagttttac agagctgtga agtaattctt actgggaaca ccagatactt
                                                                      780
acttaccatt ttatatagcg tatgtggcat tctctcatct tatcattaga gcatgcctgt
                                                                      840
atctttagcg acaatagcat tcaaacacca aatgttatat tgtctgtctg gaaatgtttt
                                                                      900
cttatacaac tcaaagggga agagggaat atgtcgtgag taaatggaat tattttctc
                                                                      960
tgcaccacat cattataaaa actcgaagag gttgggtgca gtgctcacgc ccatgatccc
                                                                     1020
agcactttgg gaggccaagg caggtggatc acttgaggtc aggagatcaa gaccagcctg
                                                                     1080
gccaacatgg tgaaatgctg tctctactaa aaatataaaa attagacggg catggtggtg
                                                                     1140
ggcgcctgta atcccagcta ctcgggaggc tgagccatga gaatcatttg aacatgggag
                                                                     1200
gcggaggttg cagggagccg aagtcgcgcc actgcactcc agcctgggtg tcagagtgag
                                                                     1260
actccatctc aaaaaaaaa gaaaaaaaaa aaaaaaaaa ntcgagggg g
                                                                     1311
<210> 988
<211> 1742
<212> DNA
<213> Homo sapiens
<400> 988
ggcacgagga gcccagtagt gacttctgtg gtccctgact tgcaccctca ccctattatt
                                                                       60
ggagttgtgc ttcatttctc tgtgtggaaa gagtgaagta ttgggaaata tgaccctggt
                                                                      120
caccaaacca actcagagac agcaagtgct ttggcaaagg aaagggctgg cacagagaac
                                                                      180
agaaacttcc aatactatgt tgaatggagg tggagaactg ggcattcttc acttgttcct
                                                                      240
gatcattctt gacatttccc ttttagagga aaagctttca gtcaccactg aacataaggt
                                                                      300
cgatttctca ttgtcttcac caatcttctg aacccgtgaa tactttttgc atgatgattt
                                                                      360
gaagcagcca ggaggccaag acagcggcca ggagaagcag caaggaattg agccttgtac
                                                                      420
```

```
atttttctca aaaaaataaa agatggggaa ccaccatgct cgagataaga aattagtctg
                                                                     480
tgaagagacc ttcaagttct gtaaatggta gaaaaaaatt taaatgagac atatctttct
                                                                     540
caatttgcat cccaattatt ttcttaaatt gtcattcact gtaacctagg gaaaacagaa
                                                                     600
ttcagaatca catggcagta atgattttca tgtcctttcc ctaactctac catgactccg
                                                                     660
ctcccctaac acacctaggt gtctttcttt cctttgtggc tcatgcaatt tcttctgcct
                                                                     720
gcaattccag taagaatgga gactctggga atggatttca gaattattca ggaggaataa
                                                                     780
ttttcaggat gtgtgagtga tcaaatctag gggccaagca agtcaaagag tgaaagaaga
                                                                     840
gctcagaagt tgaacacatt taagaggaaa gatgaaaatt ttggttcagt ggtgtcagta
                                                                     900
gtcaactaga tggaagtgta agaaggaaga tggaaatggg agactacaaa ataggaaaca
                                                                     960
gagctacaaa gagaaataaa gtaatccaaa gaaagagcat ttattagtgg acaccaagag
                                                                    1020
ttggacgtag atcctttgga aatgtaatat ttcaattgct cacaaattct ccaaattgac
                                                                    1080
aatatggcaa gtctattcaa agataagtaa gtcatggtac acagaccaac tctattacac
                                                                    1140
caaggacaca taccaagact aggagaaaag agagactggg aggaataatt ctgccttcgg
                                                                    1200
accagaggaa gagagcaaga gttagagaca gcttcctgga agaggtggca tttgagctag
                                                                    1260
ctctttaagt ttcaatggga gaagaaagaa aaggcatctg gaaacaagga agcagcagta
                                                                    1320
gcaaatgagg aagaatcaga agggaagcca gagagcacca ttatcaccag aggatatacc
                                                                    1380
aaatccagtc attcataagc tatttatttt gtgtgatttt aaacaatagc tgctatcggc
                                                                    1440
tgggcacggt ggttcacgcc tataatcctg gcactttggg aggccgaggt gggaggatca
                                                                    1500
cctgaggtca ggagttcaag gccagcctgg ccaacatggt gaaaccctgt ctctactaaa
                                                                    1560
aatacaaaat aaaaattagc caggcgtggt gtcgtgcacc tgtaatccca gctatttggg
                                                                    1620
aggctgaggc acaagaatcg cttgaacttg gaaggtggag gttgcagtga gccaagattg
                                                                    1680
1740
                                                                    1742
<210> 989
<211> 1877
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (5)
<223> n equals a,t,g, or c
<400> 989
gcgtntgcgg tgtttatctt ccagccaaac gggwaaatag tcaccaggtt tggtagccga
                                                                      60
ggaaatgggg acaggcagtt tgcaggtccc cattttgcag ctgtaaatag caataatgag
                                                                     120
attattatta cagatttcca taatcattct gtcaaggtgt ttaatcagga aggagaattc
                                                                     180
atgttgaagt ttggctcaaa tggagaagga aatgggcagt ttaatgctcc aacaggtgta
                                                                     240
gcagtggatt caaatggaaa catcattgtg gccgactggg gaaacagcag gatccaggtt
                                                                     300
tttgatggga gtggatcatt tttgtcctac attaacacat ctgctgaccc actctatggc
                                                                     360
ccccaaggcc tggccctaac ttcagatggt catgttgtgg ttgcagactc tggaaatcac
                                                                     420
tgtttcaaag tctatcgata cttacagtaa tggtgggcag gtggataccc gcttccatgg
                                                                     480
tcttgcacta taaactggaa tggatttctc aatgcgggac cagattatga ctagagtttt
                                                                     540
tatgccagaa ggaatcattg gtgaactttc caaggttatt tctgaatgta acaatttcct
                                                                     600
taaaaatgac ttatccaatt tctgtatttc acctttaggg ttaaaaaaaa ctcttctact
                                                                     660
gaatctataa aaactgcagt tttacatctg tgaactatgg cttaagggac aggatttatg
                                                                     720
tagctaaact aattttgcaa atcaaacaga cacttaaaaa actagcatat gtaaaggtat
                                                                     780
tcgttaatcc tgtgaatggt agcttttgca cagaacttcc aaaagcaaaa caaaaacaaa
                                                                     840
atctattgta gttatatact tcatttaacc taggtcacaa gacccaggga atcttctaac
                                                                     900
ctcactttta cagtaggtat tactcttgtg acatttttt ggttatcaac aactaaatat
                                                                     960
aaattacttt ggaaaaagta aggctgtctt gcaaaatgat cccagctctg attagcagcc
                                                                    1020
ctctggagtt cagaacttaa gtatcagtgc aaatttctca acctttctgg gttagacaaa
                                                                    1080
gatccttttt tgtgtgttct tttcaccacc cctttggctc accttgtatc agcaaacaaa
                                                                    1140
gtacttcttc agggaaacct gaaatttcta atgccttgaa aagcatatta caaaagtaat
                                                                    1200
gctacctttt gggaaacaaa ctgccccgtt aactccagat cattgcactg gaatgtaatc
                                                                    1260
aagaaagtta gtcatgtttt atgtaccatg ttttcacacg tgtctcttct cttcgacttc
                                                                    1320
ctgaaagcga aagctttacc tcctgcaaat gtcagcacat gtagtaggac accagtatcc
                                                                    1380
taggacagag agccataagt agccctttgg aggactgatg gtgtcaacca aaggcatgtg
                                                                    1440
attgattaat gattccccct tagaaagcaa gtgttaccaa agttgtgtta tcttgaaagc
                                                                    1500
attacaggta agggcatgtt atggttattt atcattgttt aatgaatagt agaggtgtca
                                                                    1560
```

| | | | | • | | |
|------------|------------|------------|------------|--------------------------|------------|--------------|
| agggactatg | tatacatgat | tagggtaaga | tagaatgtat | tatatatata | tatatataca | 1620 |
| | | | | aggcagcact | | 1680 |
| | | | | agcagtttaa | | 1740 |
| gtggagcaag | ccctaaagca | gatttaattt | ttgccatttt | ccaagaatga | cggtggtggc | 1800 |
| ttttagtcag | aaaatggcct | tctgtgcttt | caaaaaaaaa | aaaaaaaaa | ckcgaggggg | 1860 |
| ggcccgggac | ccaatta | | | | | 1877 |
| | | | | | | |
| <210> 990 | | | | | | |
| <211> 3013 | | | | | | |
| <212> DNA | • | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 990 | | | | | | |
| | gctccccaat | gacaggttgc | tcagagactg | ctgatttcca | tccctatata | 60 |
| | | | | atctgccaca | | 120 |
| | | | | caggcaacct | | 180 |
| | | | | aaccttctgg | | 240 |
| | | | | tgagaccaaa | | 300 |
| | | | | tcacttcact | | 360 |
| actacaaatg | cggcttctgt | ttccacacag | ccaaaacatc | ctttgtgctg | ccccttgagg | 420 |
| aagcaaagag | aggattgctt | ttgcttaagg | aagctggtat | ggagaagatc | aacttttcag | 480 |
| gtggagagcc | atttcttcaa | gaccggggag | aatacctggg | caagttggtg | aggttctgca | 540 |
| aagtagagtt | gcggctgccc | agcgtgagca | tcgtgagcaa | tggaagcctg | atccgggaga | 600 |
| ggtggttcca | gaattatggt | gagtatttgg | acattctcgc | tatctcctgt | gacagctttg | 660 |
| acgaggaagt | caatgtcctt | attggccgtg | gccaaggaaa | gaagaaccat | gtggaaaacc | 720 |
| | | | | tttcaagata | | 780 |
| | | | | caaagcacta | | 840 |
| | | | | ttgtggagaa | | 900 |
| | | | | aagattcttg | | 960 |
| | | | | gaaagactcc | | 1020 |
| | | | | gaaggaccct | | 1080 |
| | | | | atttgatgaa | | 1140 |
| | | | | gaagctggat | | 1200 |
| | | | | ctagagtaac | | 1260 |
| | | | | ctgattttct | | 1320 1380 |
| | | | | ggatagcaaa gttgttattg | | 1440 |
| | | | | cacaggaata | | 1500 |
| | | | | tagctcaatg | | 1560 |
| | | | | atttggattt | | 1620 |
| | | | • | tatttcttgt | - | 1680 |
| | | | | taaccagttt | | 1740 |
| | | | | taatgctttt | | 1800 |
| ctttatgcca | ttgcagtctt | gtacttttta | ctgtgatgta | cagaaatagt | caacagatgt | 1860 |
| | | | | gaagtctcta | | 1920 |
| | | | | sctgttccat | | 1980 |
| tacctatgtg | tgtggtacct | gttgtgtccc | tttctcttca | aagatcctga | gcaaaacaaa | 2040 |
| | | | | gtgcttgcat | | 2100 |
| | | | | aggagtgtag | | 2160 |
| | | | | tggcataaga | | 2220 |
| | | | | tagagagagt | | 2280 |
| | | | | gaactctgag | | 2340 |
| | | | | agaaagcaag | | 2400 |
| | | | | tgtggaaata | | 2460 |
| | | | | tttcttatca | | 2520 |
| | | | | aaaggtcatt | | 2580 2640 |
| | | | | gcctgatgtc tgattctgaa | | 2640 2700 |
| | | | | aaattttaag | | 2760 |
| | | | | tgtcttctat | | 2820 |
| | | | | ctaaagatgt | | 2880 |
| | _ | | | J J - | 222 | |

```
ttttgattgt gtctaagcta tgatgacctt catataatca gcataaacat aaaacaaatt
                                                                   2940
3000
cccaagtcgc cct
                                                                   3013
<210> 991
<211> 766
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (13)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (15)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (37)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (132)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (754)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (755)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (756)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (760)
<223> n equals a,t,g, or c
<400> 991
caccccagge ttnencettt tatgetteec ggetegnatg ttgtgtggaa ttgtgacgga
                                                                    60
tacaatttca cacaggaaac cagctatgac catgatttcc gccaagctcg aaattacccc
                                                                   120
tcactaaagg gnacaaaagc tggagctcca ccgcggtggc ggccgctcta gaactagtgg
                                                                   180
atcccccggg ctgcaggaat tcggcacgag gacatccagg aagagaacga aagttcccct
                                                                   240
gttggttttc ccctattttt aagtgtgagt gtatgaatgt gtgttttgtt ctcttccttt
                                                                   300
tatattgcct cctggatttg ggttgttttc ctttatctgt ccggactgta aatgtggata
                                                                   360
tgaaggttca tagtcctgta gaataacgtc agtgcttgag ctagtgtttg gtgtgaagta
                                                                   420
cctatctttt gaagggagag aaaagaatta cgactgtggt aagatttaag aggacagaat
                                                                   480
taagattatg taagggttga agaaaggttt gctgggaatg tggtgtgtt tttagcagag
                                                                   540
accccaatga cctgccaggg cacgtagaga gagcaggcta cttgagggca gggagtagac
                                                                   600
caccgccatt tctgtgacct cacatctggc atggccaggc acacagtagg tactcaataa
                                                                   660
```

```
ttaactccct gctgtttccc taatcatgta gaggaaagca acaatgttca gtaattaact
                                                                       720
gtttaaaaaa aaaaaaaaa aactcgaggg gggnnncggn aaacaa
                                                                       766
<210> 992
<211> 3138
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (3106)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (3109)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (3138)
<223> n equals a,t,g, or c
<400> 992
cagcagttca gttacttgga acaattaaag attaccctta acagccatgt taatacatct
                                                                        60
aaatgctaaa atatactacg agtttttcat agtcttgaaa gtatacagtt aattactttt
                                                                      120
caaagttact gtgktctcat gtttactctt cttgtatctg tgatatgcaa aaagatgaag
                                                                      180
actettggcc tecaggagtt tacattetea tggtgetgtt ggtteaagea gattgettta
                                                                      240
gtttattaat gaacattgct tggctattaa ttatatccta tttggaagga tcccttggtg
                                                                      300
aacagtttta aaaagcagag ggctgtgcta aatttcaggg tattgatagc ttgagtttac
                                                                      360
attgtattag ccctgctcgt tatcattttt ttccccaggg agctatgcag gtaatgctca
                                                                      420
ttagcatgaa tcagaaaaga aaccattctg cctaagagca tcttaaccat cccctaaac
                                                                      480
cacctatgct ctcctgttat agttgtcagt aaatcacgaa gaaaattaac agctccttaa
                                                                      540
gactetaeat eccteaatte tetttetttt eccagagttt gtacateatt etetaeteag
                                                                      600
atggaccagg atttgcatat aagcctttta aaactgacta gtggtcctaa ttttaacatt
                                                                      660
tttgtgtatg actcctatcc cttttctgaa gcagcattgt gatagatgtg gagcttctac
                                                                      720
ctgcatttct aagcaattat taacccaact tttgagttga aacttgcatg gatccttgtt
                                                                      780
atgtcccgta attcctctga atcaaggaat ttattttgca tgcttattaa actcaaactg
                                                                      840
ggtctgattg aaagtgcaag caatagtgac aggaccttaa ctctggtttt agagtacgaa
                                                                      900
cattctaatg catgactcaa aatgtccagt gttgtggtta ctagttattt tatatatgca
                                                                      960
tttgttaata atgaagcaat agagactaag accaatagct tgaatatatt cagattattt
                                                                     1020
tcatgtttta ataaaggatt tttcttactt ccattgaaaa tgggaagtag aagataaaca
                                                                     1080
ggggcaacca caagacattc aaactgtcag gactagggcg tagcagtgcc caccctctaa
                                                                     1140
ccacttgcct ggttccatta gtccccaagc atgtttgaaa acaaaagaca caaactaagc
                                                                     1200
atgctgaata aaactagctg ctatggctgt aataatcaga aaggtgcaga gtttcagaaa
                                                                     1260
gagtaggaaa gtagggaatg ccagtatgga gtatgtaaaa taactagata tggatatggg
                                                                     1320
gtttgkttat gatatgcttt atgtagacaa agtttgaggt cttttaaaac tgggatttga
                                                                     1380
gttgaaaaga gtcaggatgc acatatttcc actatttcag gattttcaga tgactaggca
                                                                     1440
catgttgtgg atgatactgg taccaactac caatgaccaa ctataaagta cccctgcaat
                                                                     1500
aagggagact teetttttgt agaatagtee tgaaaataet gacagatetg tggttagttt
                                                                     1560
gttattttat tgcataaaaa acagtttaaa caaattttat agccaaagtt ttatccttga
                                                                     1620
tgggtttggc cagactgcaa tttcttgact aaagctttta atgccaggtt aaacaggaga
                                                                     1680
aactttttcc actagaagaa aatccttgct atctattttt tccaatagaa gaaaatcctt
                                                                     1740
gctatttatt ttatttgatg aataaacaaa ttkattgcag tagcttaaaa, aaaattttt
                                                                     1800
tttaaacagt ctcactctgt cgcccaggct ggagtgaagc aatgtgatct cagctcactg
                                                                     1860
caacctccac ctcccgagta gctgggatta cagacatgca ccaccaccct cagctaattt
                                                                     1920
ttgtattttt agtgragacg gggtttcgcc atgttggcca ggctggtctt taactcctgg
                                                                     1980
ccttacgtgg tccgccccc cttggccttc caaagtgctg ggattacagg tgtgagccac
                                                                     2040
tgcacctggc ctgtagtagc ttaaaatttt ccttgagaaa attcctgact ttaaaaataa
                                                                     2100
cccttatata agtacaagtg attgtgacaa atgacgtaaa aatggcattc atgatgtctg
                                                                     2160
aaacaagcct aaatagaatt caagattaga ctaaatgatt ttcacaaagc acattcaagg
                                                                     2220
```

```
ttttacattc tatgattgaa aaaaattttt tgaaaacttt ttatttcatt ctttcctgta
                                                                       2280
  ggattttgct acaaataact ttgggaatga ataaagtgga atggtaactt tccagtggtt
                                                                       2340
  cagaattgaa ttagacttct tgtgactgtg atgtttggtt tccattgaaa tatatgaagt
                                                                       2400
  gagatgtcat atcctgaata tagtttgtct tccccaatta cttgatagca tgtctgtcag
                                                                       2460
  ccagtaaaga ttaagaacag agtttctcta aattcctccg attattccac taaggcacat
                                                                       2520
  taaaatactt aattttggga aaccagacat cacagatttc tccatgaagt cctaaatctt
                                                                       2580
  ctttaaagtc agaataggta tcttagttac tgacagtatt caggtttttt tctcccttgg
                                                                       2640
  tgatatgtca ttccatcagt gaaaaaatat tttctcccag ggataagaaa ggtattctgg
                                                                       2700
  taatacatta tcatcaatcc ttaaacagta acagtcttgg cacttatcac aaaaccgacc
                                                                       2760
 cattlettat aaccagaaag attatettag actgteette acattataet ttacetaetg
                                                                       2820
 ccttgtaaga ataagagttg ctcactgtgt ttacttgctg tcctccatat tctccattgo
                                                                       2880
 accattggtg tataacgtta agagtttcat tgaatattat tttaagtatt acaaaaggca
                                                                       2940
 gcttgcttct taatctatgc atctttgggg tttttgaaga aatttaattc tttgatgtaa
                                                                       3000
 aaaggaactg ttaaaaaagt tggaagctct gcacctgtgt atatatatat tttagcaata
                                                                       3060
 aagcagcatg ggctgagaat gcactgaaaa aaaaaaaaa aaaacncgng ggggggcccg
                                                                       3120
 gtacccaatt cgccctan
                                                                       3138
 <210> 993
 <211> 1698
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> SITE
 <222> (17)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (22)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (30)
 <223> n equals a,t,g, or c
 <220>
<221> SITE
 <222> (755)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (770)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (922)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (1689)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (1692)
 <223> n equals a,t,g, or c
```

```
<220>
 <221> SITE
 <222> (1694)
 <223> n equals a,t,g, or c
 <400> 993
 tggaaagggg gatttcnaag gnaaatctcn cttgggatta agaagctgga gctccaccgc
                                                                        60
 ggtggcggcc gctctagaac tagtggatcc cccgggctgc aggtttcaaa tccagcttat
                                                                       120
 cttctgtttt gtttccagat taatctttct gcagcacaga cccacatata ttattcaatt
                                                                       180
 gaacaaacac tttcaaaggc tccaattgtt taccacatta aggaccacct tcttgccttg
                                                                       240
 ggattcaaat aattctggta cagggatcag gacttcgtcc caacctctca ctagtctact
                                                                       300
 gcattatgct cagtccgtgg tggggatctg attgtttcct tgaacttgct ctgttctttt
                                                                       360
 ctgcctcaga gctgtcctta ctgcccctgg cactttccat cttccccatt tacatctgtc
                                                                       420
 tcagcagatt taaattctac cttctccagg atgccaatca taatttcccc atcaaatgta
                                                                       480
 atctcttggt ctttgcaagc cccactgtac tttgtcaaaa gtgctcacca cgtggtactg
                                                                       540
 agaactatag cttcctgcaa tgtggatgta gtcatcctcc atttttcctt cccttctgcy
                                                                       600
 tccagacacc tyacaggtag gagttwaggc tgatttatcc gkgwattccc taaaattcca
                                                                       660
 gccacatgct tttcatgcaa tggcagtgca acagatagkt atattctgaa cggaaccmat
                                                                       720
acagataaat cccagttaag aactctagca cacanaacaa ttttcttggn tctacttttg
                                                                       780
ctgcatcata cagcagagct tcttaacttg staaaaacaa aagktttaaa tgtttcgaca
                                                                       840
aaaatattca gatagatata ctttcccaca ggatgtcaga aaccattgaa tgtcamcaaa
                                                                       900
tatagtggga tatttttcta cngaaggagg aagttgatac taatcattca gcatawtttt
                                                                       960
aatctctcat ataattgatg gctgcagawt cttttccttt wtcttttttt grgacaggat
                                                                      1020
ctyactctgt cactyaagct gragtaagtg gcacaatctt ggcctactgc agccttgatc
                                                                      1080
tctgggactc aatcgatcct cccacctcag ccttctgagt agctggggct acaggcccac
                                                                      1140
gccactatgc ctggctaatc tcttttgtat ttgtagagac gggattttgc catgttgcct
                                                                      1200
aggctggtct ccacctcttg ggctcaagtg atcctcctgt ctcggcctcc caaactgctg
                                                                      1260
ggattacagg caggagctac cgtgcccagc tggttgcaga tttcatacca gcagtcaaat
                                                                      1320
taaagtacat aaaaatacaa gaagatattg tctattaaaa tctacagaga acatgagtat
                                                                      1380
ttaagttaca aaatatgggg aaaaggttaa atgtcttcac agaataaatc aatcaacaaa
                                                                      1440
tatttattat aagtcactga gtgatataaa aaaagtaaaa taaggctttt ataccccagg
                                                                      1500
agataatgca gtgggtaaga taggagagga ggctgtttca ccagtccagg gctgcagtga
                                                                      1560
ttaggattgg agaacagctg tggtgaagag ttaggtaaaa ggaaaggaga agcaaarctg
                                                                      1620
acwtaaagct cgtgccgaat tcgatatcaa gcttatcgat accgtcgacc tcgagggggg
                                                                      1680
gaccggaanc cngngcgt
                                                                      1698
<210> 994
<211> 1848
<212> DNA
<213> Homo sapiens
<400> 994
gcttgggtct tagcatgctg attgactccc agaacaacca gtatattttg accaagccca
                                                                       60
gagattcaac catcccacgt gcagatcacc actttataaa ggacattgtt accataggaa
                                                                      120
tgctgtcctt gccttgtggc tggctatgta cagccatagg attgcctaca atgtttggtt
                                                                      180
atattatttg tggtgtactt ctgggacctt caggactaaa tagtattaag tctattgtgc
                                                                      240
aagtggagac attaggagaa tttggggtgt tttttactct ttttcttgtt ggcttagaat
                                                                      300
tttctccaga aaagctaaga aaggtgtgga agatttcctt acaagggccg tgttacatga
                                                                      360
cactgttaat gattgcattt ggcttgctgt gggggcatct cttgcggatc aaacccacgc
                                                                      420
agagcgtctt catttccacg tgtctgtcct tgtcaagcac acccctcgtg tccaggttcc
                                                                      480
tcatgggcag tgctcggggt gacaaagaag gcgacattga ctacagcacc gtgctcctcg
                                                                      540
gcatgctggt gacgcaggac gtgcagctcg ggctcttcat ggccgtcatg ccgactctca
                                                                      600
tacaggcggg cgccagtgca tcttctagca ttgtcgtgga agttctccga atcctggttt
                                                                      660
tgattggtca gattcttttt tcactagcgg cggtttttct tttatgtctt gttataaaga
                                                                      720
agtateteat tggaceetat tateggaage tgeacatgga aageaagggg aacaaagaaa
                                                                      780
tcctgatctt gggaatatct gcctttatct tcttaatgtt aacggtcacg gagctgctgg
                                                                      840
acgtctccat ggagctgggc tgtttcctgg ctggagcgct cgtctcctct cagggccccg
                                                                      900
tggtcaccga ggagatcgcc acctccatcg aacccatccg cgacttcctg gccatcgttt
                                                                      960
tcttcgcctc catagggctc cacgtgttcc ccacgtttgt ggcgtacgag ctcacggtgc
                                                                     1020
tggtgttcct caccttgtca gtggtggtga tgaagtttct cctggcggcg ctggtcctgt
                                                                     1080
```

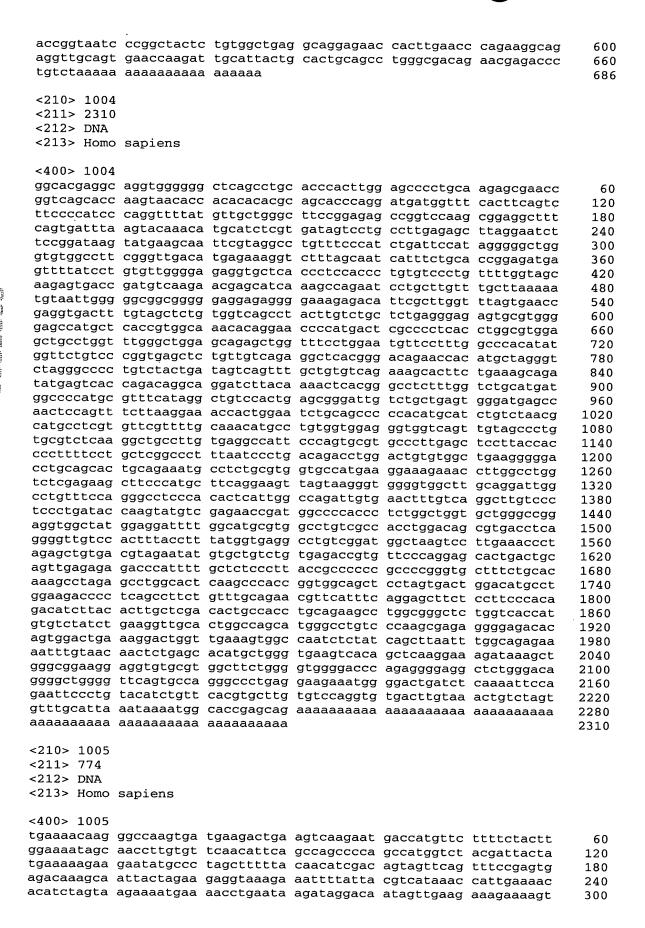
```
ctctcattct gccgaggagc agccagtaca tcaagtggat cgtctctgcg gggcttgccc
                                                                      1140
aggtcagcga gttttccttt gtcctgggga gccgggcgcg aagagcgggc gtcatctctc
                                                                      1200
gggaggtgta cctccttata ctgagtgtga ccacgctcag cctcttgctc gccccggtgc
                                                                      1260
tgtggagagc tgcaatcacg aggtgtgtgc ccagaccgga gagacggtcc agcctctgat
                                                                      1320
ggctcggaga tgatggaccg tgaaggaagc gtctgtgggg agtgagcgct tagatggcca
                                                                      1380
gcagctgctc cttctggaag ctcgcacctt ggcaacagaa cagccctcta gcagagcgtc
                                                                      1440
agtgcagtcg tgttatcccg gcttttacag aatattcttg tcctatttta gaattttccg
                                                                      1500
gagtagttta tttgcagtct gttgattatg tgcagtagac ccgggacact gcgttttacc
                                                                      1560
gatcaccttg aatgtggtgc ctggatgtgc cttttttttt ttccctgaaa ttattattaa
                                                                      1620
ttttctattg tgagttcatc agttcatagt ttttttagta aagaagcaaa attaaaaggc
                                                                      1680
ttttaaaaaat gtacaacttc agaattataa tctgttagtc aaatatttgt tattaaacat
                                                                      1740
ttctgtaata tgaagttgta atcctggccg tgagcttgga agcttacttt tgattcttaa
                                                                      1800
agcctatgtt ttctcgtgcc gaattcgata tcaagcttat cgataccg
                                                                      1848
<210> 995
<211> 740
<212> DNA
<213> Homo sapiens
<400> 995
ggcacgaget eccagetacg geegacatgg gtetggetee ggteggtett ceaccagtgg
                                                                       60
ccaacatggg tctggcttag gcgagtcttc tggctttggt caccacgagt ctagctcagg
                                                                      120
gcagtcctct agttacagtc agcatgggtc tggctcaggt cactcctctg gctacggaca
                                                                      180
acacggctct agatcaggac agtcatctag gggtgaacga cacggatcta gctcaggttc
                                                                      240
gtcttcccgc tatggtcagc atgggtctgg ctcccgtcag tcttcgggcc acagccgaca
                                                                      300
agggtctgga tctggccagt cccctagccg cggccgacat gggtccggtt tggggcactc
                                                                      360
ctccagccac ggccaacatg ggtctggctc aggtcgttct tccagccgtg gcccatatga
                                                                      420
gtctggctcc ggtcactctt ctggcttagg tcaccgagag tctggctcag gacagtcctc
                                                                      480
tggttacggt caacatggat ctagctcagg tcattcctct acccatgggc aacatggttc
                                                                      540
tacatcagga cagtcatcga gctgtggcca acatggagct agctcaggtc agtcttccag
                                                                      600
ccacggtcag catggctctg gctcaagtca gtcttctggc tatggccgac agggctctgg
                                                                      660
atctggccag tctccaggcc acggccagcg tgggtctggc tcgtgccgaa ttcgatatca
                                                                      720
agcttatcga taccgtcgac
                                                                      740
<210> 996
<211> 1015
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (365)
<223> n equals a,t,g, or c
<400> 996
ggcacgatca ctccccacag ggtgtattgg gggctggggg taagcacgtg tcatggggca
                                                                       60
ccaacgctgg tcccctcaag ccaagactcc ctggtgtgga ctcagctgtg gcgagaggac
                                                                      120
agtttagcac tgggaagttc atgccgcaac atggccttct tctgtagctg tgggtctagg
                                                                      180
gccgtggaga cctcttgggt gtttctcctg attctctgcc agcctcctgg ggctgtgtgc
                                                                      240
acaggegttg gecaettage teeettetag eetgggeega ggggaagget catgteetge
                                                                      300
ggggtcccct gactgctgct gatggcactc catgctgagg gcggcctgat gggatggtgt
                                                                      360
gctangacct gggcaacggg acaccagcag ctgctggcag gaccttctca cttgtcagtc
                                                                      420
tgctgggttt tcttttttt ggagatgggg tcctgctgtg tcacccaagc tggagtgcag
                                                                      480
tgatgcgatc acageteact gtageetega ceteceggge tecagtgate eccetgeett
                                                                      540
tggaccctgt cctcagagct cctgggggcc gccctgctcc atcccagaac ttaaccacgc
                                                                      600
tecetggaac actetgaagg geetgtggge aaaaaacetg etggeeteet gttgcaacte
                                                                      660
ttaatctgaa gtcctctgaa ctctaaatct gaactcactc cacctgtaag aaaaacggct
                                                                      720
ccgctgcaaa ctggctggtg caatcccaag ctcaagctgg ggagctgctg cgtctgtggt
                                                                      780
caggeeteet geteetgeea gggageaege gtggtetteg ggttgagete ggeegtgegt
                                                                      840
ggaggtgcgc atggctgctc atggtcccaa cacaggctac tgtgagagcc agcatccaac
                                                                      900
cccacgcttg cagtgactca gaatgataat tattatgact gtttatcgat gcttcccaca
                                                                      960
```

```
1015
<210> 997
<211> 1906
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (9)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (20)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (35)
<223> n equals a,t,g, or c
<400> 997
cgggctcgna tgttgtgtgn aattgtgagc gatancattt tcacacagga accagctatg
                                                                      60
mccatgatta cgccaagctc gaaattaacc ctcactaaag ggaccaaaag ctggagctcc
                                                                     120
accgcggtgc ggccgctcta gaactagtgg atcccccggg ctgcaggaat tcggcacgag
                                                                     180
gtcttaacca tgctgttgga tttgcaagtc gaaccagtaa agctttcagc aacaaacaga
                                                                     240
ctgtgaaaca atgtggctgt tccgaagttt atctggactg tttacagaca ttcttgccaq
                                                                     300
ccctcagttg tcccttacaa aaggatattc tcagaagtgg agtccgtact ttccttcatc
                                                                     360
gaatgattat ttgcctggag gaagaagttc ttccgttcat tccatctgct tcagaacata
                                                                     420
tgctcaaaga ttgtgaagca aaagatctcc aggagttcat tcctcttatc aaccagatta
                                                                     480
eggecaaatt caagatacag gtateceegt tittacaaca gatgiteatg eccetgette
                                                                     540
atgcaatttt tgaagtgctg ctccggccag cagaagaaaa tgaccagtct gctgctttag
                                                                     600
agaagcagat gttgcggagg agttactttg ctttcctgca aacagtcaca ggcagtggga
                                                                     660
tgagcgaagt tatagcaaat caaggtgcag agaatgtaga aagagtgttg gttactgtta
                                                                     720
tccaaggagc agttgaatat ccagatccaa ttgcacagaa aacatgtttt atcatcctct
                                                                     780
caaagttggt agaactctgg ggaggtaaag atggaccagt gggatttgct gattttgttt
                                                                     840
ataagcacat tgtccccgca tgtttcctag cacctttaaa acaaaccttt gacctggcag
                                                                     900
atgcacaaac agtattggct ttatctgagt gtgcagtgac actgaaaaca attcatctca
                                                                     960
aacggggccc agaatgtgtt cagtatcttc aacaagaata cctgccctcc ttgcaagtag
                                                                    1020
ctccagaaat aattcaggag ttttgtcaag cgcttcagca gcctgatgct aaagttttta
                                                                    1080
aaaattactt aaaggtgttc ttccagagag caaagccctg aggactggat ttccctgtgc
                                                                    1140
ctacttcatg atcatgaatt ccagttaatt tataaagagg cgatttttgt gtgccattca
                                                                    1200
cactggtctt tttcacattg ttttgagctt attgcagtat atgttttggg atttttctgt
                                                                    1260
aaaatgggtg taattttcct aatacaggta tgtaacaaca aaagaagttg cctgcatgcc
                                                                    1320
ggtccaaatt gttctgtata aagatgctct taaaagacac aagagttatc ctagaacctt
                                                                    1380
aattcttttt tatttgaaat tttaagtcaa gtcctttata aagaccatag cagtggaaaa
                                                                    1440
cagtgtactt tttaaaaaaat tgctgaatat aaaatctttg aaaattttct ttatgtgtga
                                                                   1500
agacacaaag tatgggggaa gacagcaatc aaaactaact ttttgtagat agccatttca
                                                                   1560
tttctttaaa ctgtttcaac gccaatatgt attctacaaa agagaatggt tttaggctcc
                                                                   1620
agtgttatac tttttttat atatatatat aaaaataaac tttacgtagt gaaatcttcc
                                                                    1680
aagtcttttc tggaattatt ataaatactt tagttttatt ttctcatctt aatctctcca
                                                                   1740
taatttccca tttaaaggtt tacaaatatg agtgtgtgga tgctttaatt catttaacct
                                                                   1800
cactcctcaa aggtaacatg caacttagtt ctgttatatg agagtctttt tctttaatgt
                                                                   1860
actggaaaaa gcctatgtga atctgttgat agaatttaaa attcca
                                                                   1906
<210> 998
<211> 1216
<212> DNA
<213> Homo sapiens
```

| <400> 998 | | | | | | |
|-------------------------|------------|------------|------------|------------|--------------|------|
| | | | | | tgaggacttt | 60 |
| | | | | | cctttcagtt | 120 |
| atttttaatg | tgccaaaaat | ttgtacatgt | tcaattaaaa | atgttgtata | atagtgtaat | 180 |
| acttttcttt | gtatgaaaat | gtcctcttct | tcaaaggtat | aggctttgta | atgaattaga | 240 |
| | | | | | gttaccatgc | 300 |
| taagaatgtc | tttgtttaaa | gggaattaat | ctttttatga | tgtattaatc | tgtgttttca | 360 |
| attgttttcc | aagtacagtt | caaataactt | gcatatttac | tatacaaaat | ggttgacaag | 420 |
| tgttctttt | gcaaagactt | gaatacattg | gcagaggtgc | taatcacatc | ttccctaagg | 480 |
| cacctggaag | aattatttga | ggaaaaaatg | agttttcaca | ttgttttata | ggaaattaaa | 540 |
| tttgtccaaa | gatttggaga | ctatttttaa | aacataaata | cataaaattt | cattatttcc | 600 |
| tgctatcttg | tttgctggca | gaagtgaatg | tttggtgagg | ttattttggg | ataaattaca | 660 |
| aaagaaaaaa | aattagacac | tgcattaatt | tcttgttctt | ttggaatatc | ttagtaactg | 720 |
| aggatcattt | tctaacaatg | tggttgacat | accttcagtt | gctttccaca | tctaaaagag | 780 |
| ttatctttca | tatatgtaca | agttattggt | agtcttattt | ttgggctgtt | tgttgactta | 840 |
| | | | | | caattcctaa | 900 |
| cacttgatat | cttaatatca | gtcactaaca | ttagtaactt | cttgtatgtt | atattatggc | 960 |
| agatetett | acgtttttc | tcacatctat | ctgctagtcc | aggaatttgt | tactaaatag | 1020 |
| | | | | | tgtaaaccac | 1080 |
| | | | | | tgtatatata | 1140 |
| | | atatcattca | tttataaatg | aaatgccttc | taactttaaa | 1200 |
| aaaaaaaaa | aaaaaa | | | | | 1216 |
| -210- 000 | | | | | | |
| <210> 999 | | | | | | |
| <211> 1191 <212> DNA | | | | | | |
| <213> Homo | caniona | | | | | |
| \Z13> HOIIIO | saprens | | | | | |
| <400> 999 | | | | | | |
| | ggccggacag | actgacgtgt | gagetgeate | acaaaaaaaa | cataacaaaa | 60 |
| atggcgctgg | cgcgggcctg | gaagcagatg | tectaattet | actaccagta | cctactaata | 120 |
| acggcgctct | acatgctgga | accetagaaa | cagacagtat | tcaattccat | actaatttcc | 180 |
| | tggcactata | | | | | 240 |
| | ttgaaatcgt | | | | | 300 |
| gaaagaccca | ccctacgaag | ttqqaatqaq | accatcagat | gtgataagaa | actettetag | 360 |
| | aaccaacctt | | | | | 420 |
| | gttgtgttct | | | | | 480 |
| | aacattgtag | | | | | 540 |
| actgtttcaa | tattaccccc | gtgaaagctt | ttcttaatgt | aactttgagt | acattttaat | 600 |
| tgccttctat | ttttaaaact | caaaatcatt | agttgggctt | tactgttctt | gctattqtat | 660 |
| ggcatataca | tctgcctgga | tatatttcta | ctcttgaccc | aaagttttgt | aaagaacaat | 720 |
| | gggtaggggt | | | | - | 780 |
| agatttatct | gtaagcttga | actcaggagt | acagttttag | ctatctagac | tctaacagct | 840 |
| tttgctttaa | aattattaaa | gtgtttctta | atgaaaaaga | aaagatcttg | ctaaagttaa | 900 |
| aataaggaac | atttcacctt | ttaaatattt | aattcttatg | tggacttatt | tccagaaaac | 960 |
| tttggtgata | attcttgaga | caaaggtggt | taagtagcat | tattatgtaa | tgcttatata | 1020 |
| ccatagagtt | tttaatagaa | gagaaatcca | tttcctccga | gggtcactat | taacaatgta | 1080 |
| cttccttaaa | tttagtttaa | tgattgtaat | gggtgctgca | tttgcacatt | gcattaagtt | 1140 |
| atgatgagac | gaattgttgt | taaaaaatta | tagcaaaaaa | aaaaaaaaa | a | 1191 |
| .010. 1000 | | | | | | |
| <210> 1000 | | | | | | |
| <211> 1418 <212> DNA | | | | | | |
| <212> DNA <213> Homo | canions | | | | | |
| ~∠13> HOMO | sapiens | | | | | |
| <400> 1000 | | | | | | |
| | tcagcctggg | agcettttgg | aaggetetga | atcotacoct | gaggaattag | 60 |
| gttcaactct | scctatggcc | ttaacaataa | ggattattgg | atatacatas | atadagaactay | 120 |
| aatttcttag | agcttagttt | tgtggagaaa | cagatgaggt | acadaddadc | acceaccea | 180 |
| gagctgctgt | acttgtttag | gtgtgagvta | gcctcagggt | gaattatata | gagctgttg | 240 |
| tactgcagat | atgacagggg | gcctagctgc | aagagcaggt | gggagggctt | cattccaddd | 300 |
| | | | -5-5-4550 | 222-222000 | | 300 |

```
gcctcagtgt ggctaactca ggttgagrag agaagatcct gratggtaga gragsccagg
                                                                     360
ttgaatacca tactcaaccc ttggaaggca gaaagcagcr agggaggtga ttcactacaa
                                                                     420
tagctggggc agcagatttt gcggtgctga gtcccacctt tcagcttgat ggatgctcac
                                                                     480
ctcttctcag ccccagctcg tgccctgttt ttctagccat agcccccaga ttactcacag
                                                                     540
ctcctcatgc catttcctgt ccagattgct atgtatgact ctgacctctc ttgtccagtg
                                                                     600
gtctggtgct cacctcctct cactgctaga atattcacca agggtttgca tttgggaagt
                                                                     660
cccttaccag ctcctgctta gagctggtag ggccatacat gtccacactc ccaactggtg
                                                                     720
gctctcccgc tgaatggggc ctcagcaggt gcccaagctg ctacaacctt ggccactctg
                                                                     780
tttctccacc ccagcactgg gcatggtaat tagcctttcc ccatgttaat ttattcagtt
                                                                     840
ttttcaaggg tcaactgaat tccccacttc ctgggtaaga agcatgatct ccttttaatt
                                                                     900
tcacgtctaa gatcctggca gcttccccta gctggttcct ctgtagtcct gctgggactg
                                                                     960
tcagctcatt taaatgtggg tctgcagaag gctttaggtc tcccccaacc cccttacctt
                                                                    1020
tcacagagga acctttcatc aggataaatg attattgctg ccctgtgggt cttgctcaat
                                                                    1080
actgttcata cctggagaga gaaggtattg aaacatctcc tttatgtgtg actttcccaa
                                                                    1140
atttttaaaa attgtttatg gtttaggccc cttaaatact gtgtagcagg atgaagtcta
                                                                    1200
ccattaccag ctgggtcacc ttggatgggt ctgtcaacat ctaagcctca gttccctcac
                                                                    1260
ctgtaaaaat gagggtagtc cctacctcat aagggatatt gtgaggatgg aaagcgaaag
                                                                    1320
tgtgagaaaa tacctcccaa gtgcctggta catagtgggt gctaaataaa ccactttttg
                                                                    1380
tctgcaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaa
                                                                    1418
<210> 1001
<211> 1854
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1851)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1852)
<223> n equals a,t,g, or c
<400> 1001
ggacgcgtgg ggagagattg gagtcctggt ctccctaagg gaatagccct ccacctgtgg
                                                                      60
ccccattgc attcagttta tctgtaaata taatttattg aggcctttgg gtggcaccgg
                                                                     120
ggccttcatt cgattgcatt tcccactccc ctcttccaca agtgtgatta aaagtgacca
                                                                     180
gaaacacaga aggtgagatc acagctctgc tgkcagagat tactagccct tggctctctc
                                                                     240
gtttggcttg ggtattttat attatttctg tcataacttt tatctttaga attgttcttt
                                                                     300
ctcctgtttg tttgcttgtt agtttgttta aaatggaaaa aggggttctc tgtgttctgc
                                                                     360
ccctgtaatt ctaggtctgg aacctttatt tgttctargg cagctctggg aacatgcggg
                                                                     420
attgtggaat tgggtcagga accetetetg gtattetgga tgttgtaggt tetetageag
                                                                     480
tctagaaatg gatacagaca tttctctgtt cttcaagggt gataggaacc attatgttga
                                                                     540
gcccaaaatg gaagtaataa taaatgcctc ctggaggctg tgggtgtggg ggattctgta
                                                                     600
tctggattcc gtatcactcc aactggaggc tgtgggtgtg ggggattctg tatctggatt
                                                                     660
ccgtatcact ccaagtggag gctggcaggt ttttctgcaa gatggtccag aatctaaaat
                                                                     720
gtcccattaa tctggtcact tgggtttggc tctgctgtat ccatctatag tggtagagac
                                                                     780
ccaccagggc tcaagtggag tccatcatcc tcccacgggg gcctgttctt agcactgagt
                                                                     840
tgatcgctcc atgggggaga gatcagacat tccttatcag agatgatgtg accttttctg
                                                                     900
actctgccca gtctctatga atgttatggc ctagggaaga atcatgaaac tctttagctt
                                                                     960
gattagatgg taaacagtgt taacccatcc tttactacag aggcatctgg gtttgaatgt
                                                                    1020
tacctggggt tctctctatt gagttgagcc ccttcttcct ttagtgggtt ttggacatct
                                                                    1080
tctggcaagt gtccagatgc cagaaccttc ttttcctcta gaagggatgg tgcttggtaa
                                                                    1140
ccttaccttt taaaagctgg gtctgtgacc tggtcttccc atccctgcat tcctgtctgg
                                                                    1200
1260
gtttgctgta gtttggttgg gattattgtt ggcattacag atgtaaaaga ttgactagcc
                                                                    1320
cataggccaa aggcctgttc tagttgacca agtttcaagt aggattaaga ggttggttga
                                                                    1380
ggggtgcagt ttctggtgta ggccaggtag gtagaaagtg aggaacaggg ttgcctcttg
                                                                    1440
gctgggtgga gtctctgaaa tgttagaaga agcgctgaag ccttgattga tagttctgcc
                                                                    1500
```

```
ccttgttgcc ctggggctta tctgattatg ggacgagggt agamagtaag aagcactttt
                                                                  1560
gaatttgtgg ggtagaactt caacaataag tcagttctaa gtgctgtcgc ctggggacta
                                                                  1620
gtgagaaage tactettete cetetteeet ettteteeee atggeeeeae tgeagaatta
                                                                  1680
aagaaggaag aagggaaggc ggaggagtct ataagaagga atcatgattt ctatttagca
                                                                  1740
gattggatgg gcaggtggag aatgcctggg ggtagaaatg ttagatcttg caacatcaga
                                                                  1800
1854
<210> 1002
<211> 695
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (602)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (677)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (687)
<223> n equals a,t,g, or c
<400> 1002
ntgtgatccc cgggttamsa attctgaaca tggcggcggt ggtagctgct acggcgctga
                                                                   60
agggccgggg ggcgagaaat gcccgcgtcc tccgggggat tctcgcagga gccacagcta
                                                                   120
acaaggette teataacagg accegggeee tgeaaageea cageteeca gagggeaagg
                                                                  180
aggaacctga acccctatcc ccggagctgg aatacattcc cagaaagagg ggcaagaacc
                                                                  240
ccatgaaagc tgtgggactg gcctgggcca tcggcttccc ttgtggtatc ctcctctca
                                                                  300
tcctcaccaa gcgggaagtg gacaaggacc gtgtgaagca gatgaaggct cggcagaaca
                                                                  360
tgcggttgtc caacacgggc gagtatgaga gccagaggtt cagggcttcc tcccagagtg
                                                                  420
ccccgtcccc tgatgttggg tctggggtgc agacctgagg agcgctgcga ccctcctagg
                                                                  480
ctattgactg ttaagtcctc aggtttggcc cagattccag ttcgtgcctc tgaggtccac
                                                                  540
cagagggcgc atgaagccca ggctgttgcc aaaccctacc ctgccccaca ccaaggagcc
                                                                  600
660
gggggggccc cggtaancca atttggnccc tataa
                                                                  695
<210> 1003
<211> 686
<212> DNA
<213> Homo sapiens
<400> 1003
ggcacgagtc tgcattggaa attggctgaa tgacagtatg tgggtccttt gcaatttttc
                                                                   60
tctgtataaa gagtgccata gtggctgcat ctgagcatgc ctgcattcct acagatatct
                                                                  120
aaagatteet eeatgteagg eagttgtaag ggtgattget teetetagga ggggaeattt
                                                                  180
cctgttttct tagatctgac aagattcctc cctgtcccca actatcaaag tatccgtttc
                                                                  240
cagcaagatg agattcctct tcagttaaac aaaacttgct actttttata ttttaaaaat
                                                                  300
ctttatatat atatatac acacacaca acacacatac atatacgtac acatttgcac
                                                                  360
acatatatgt atatattttg aaaatttgct ggatgtggtg actcatgtct gtaatcctag
                                                                  420
cactttggga agctgaggtt ggtgggtcac ctgagctcag gagttcaaga caagcctggc
                                                                  480
caacatggtg aaacccatct ttactaaaaa tacaaaagtt agccgggcat ggtggcaggc
                                                                  540
```



| gtctggtact | tcattagact | tgtgtagctg | tgtactgcat | gagtaatctg | ataatcatta | 360 |
|------------------------|--------------------------|--------------|------------|--------------|------------|------------|
| agattatatt | : aatttcttta | aaaatagctt | taaagaatto | acagetatat | atotaccttt | 420 |
| tataaatcto | tcatttttgt | tttgtaagtt | gacaggtcag | , taaaaattta | ggcatatata | 480 |
| tttgtacata | tgtgtgtgta | tgtacatgtc | tatgtgccta | ı tatatgcatg | tttttatatc | 540 |
| taaatateta | tttatatata | catacaaacg | tgtttattgt | : ttaaatgatg | ttttaaatcc | 600 |
| caguiggaga | agcatttctt | gtaacaaact | gattettetg | r tatcaaacct | ggaaaaaaat | 660 |
| tttccttate | ctgacatcgt atcccattaa | gaacagtetg | cagtgggcta | tggtttcttg | tcaagtctta | 720 |
| cccccac | , accedateaa | acyccyccac | cctycaaaaa | aaaaaaaaaa | aaaa | 774 |
| <210> 1006 | , | | | | | |
| <211> 614 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| .400. 1006 | | | | | | |
| <400> 1006 | | | | | | |
| caactgagt | ttttgtctgt | gttatctgaa | cactctactt | cctttgcagc | cttagtcaca | 60' |
| taggccccta | atctcaagta caggtatatt | ttaaaactct | acacacagec | caggetgtte | tgagtcagaa | 120 |
| ctgaactact | gacctggatc | ttagtcctag | cctttttact | aatgtgtact | gctggtatag | 180 |
| atctctaaac | tagggaaaca | ctagaattct | ttcttagctg | tagagaaaga | tatttagtta | 240 300 |
| gatgactttg | aatgaataga | ctactatact | gaaagagett | tatcacacto | totoaaagta | 360 |
| tgtaaagata | cataggtgga | tgctcttact | gcagcagtca | tgaatacatt | tttagccatt | 420 |
| tacctaagga | aaaaggcagt | ttttctaggt | accatgaagg | aagattgacc | ctattaatat | 480 |
| gcctgtgggg | gtgggatgtg | agtgggactg | ataaactgat | acttttggtt | cgtatgtaca | 540 |
| tactggaaga | atcttcataa | taaatgagac | tacacaacaa | taaaaaaaaa | aaaaaaaac | 600 |
| tcgagggggg | gccc | | | | | 614 |
| -210- 1007 | | | | | | |
| <210> 1007 <211> 849 | | | | | | |
| <211> 649 <212> DNA | | | | | | |
| <213> Homo | canione | | | | | |
| 1213× 1101110 | saprens | | | | | |
| <400> 1007 | | | | | | |
| ggcacgaggt | ccatggcaac | ctctttcctg | aagttagggt | gtatgccatc | caggcctgat | 60 |
| tgtccaaaac | acgtatctgc | tttctccatg | ccattgaaca | tccttccata | gcctccattt | 120 |
| tatatggcta | gaggatgttt | ccttgcatag | atgtattaaa | atgtatttag | ttatcttctc | 180 |
| ttgctgccct | ttaggtgtat | tccctttttt | ctctcatgtg | aacattttc | acagatatcc | 240 |
| ttgtagctta | cttaaccttc | aggcacatac | catgttgcat | agatcataat | ttcctaataa | 300 |
| ttagtgttat | tccttggtca | gatggcatgc | aaaattataa | gactttaaat | gagtcttata | 360 |
| taccactact | tacagtcact | tatgatatta | taatcactta | tgataccacc | agtgattttt | 420 |
| tagttgtagt | ctgcttgtta | gtacaagctt | gttatgtaac | atatttgctt | gaagttattt | 480 |
| ctatttatac | atatgctttg | gitgitaagt | aaaggagttt | cttgaaatgc | aaaaatttca | 540 |
| ttttaagttg | ttaaatgagg gagaaaacaa | atctgcattt | actostocao | agracegara | gatggtagtt | 600 |
| ggatcaatac | tcagctgaga | ccaaatacaa | tagcatatac | ctataataa | aggicateg | 660 720 |
| gaggccaagg | caggaggatt | gcttttgcct | gggatatcga | gactacagta | agcaatctga | 780 |
| gcgccactgc | actccagcct | gggtgacaga | gtgagagcct | gtctccaaaa | aaaaaaaaaa | 840 |
| aaaaaaaa | | | | 5 | | 849 |
| | | | | | | |
| <210> 1008 | | | | | | |
| <211> 762 | | | | | | |
| <212> DNA | aaniana | | | | | |
| <213> Homo | sabreus | | | | | |
| <400> 1008 | | | | | | |
| | ttcctgttgg | ctctaaccct | caattaccta | atcttatect | ttaacacata | 60 |
| actgcattgg | atgtgagagt | aacgtaccgt | atggtcattg | ttctatatat | taacattgaa | 120 |
| cactgctgcg | attgctcaag | gacattttat | gttacggctt | taaagcaaag | gcatgattat | 180 |
| tagaaactat | ttaagctttt | ttctttgaaa : | aacaagctcc | ttttacagaa | tataaacaac | 240 |
| agtagtgcct | gtggtttagc | ccaccaatct | tgatgactaa | aagtagctga | tacattatac | 300 |
| atatgatgct | tgagatggtt | tttgcaaaag (| cagaaatcgc | tgcaaggtaa | tcacaataga | 360 |

| | tcacttgttt atgtagaaag aaagcagtgt | agtttttaaa aatgtgacaa cacagctaaa | cgttagtata cacaccttgg aagaaagaaa | atctgaataa ggtagttctgo tcgtttctaa | a ataaaatgtt : ttgtgttttt a cagtaaatta | gtacagcttt gccaaattca gcatattgta ttgtgcttta taaacttgta | 420 480 540 600 660 |
|---|--|--|--|---|--|--|---------------------------------|
| | taaataacaa | ttgtgtaatg | tgtctccctc attaaaaaaa | : ctacattgta | acaattgctt | cagcctacgt | 720 762 |
| | <210> 1009 <211> 778 <212> DNA | | | | | | |
| | <213> Homo | sapiens | | | | | |
| | <400> 1009 | | | | | | |
| | ggcacgagat | ttcttgaatg | aatttcacat | ttgtaactat | gattttggca | gaatagaaga | 60 |
| | gtgctatacg | gttaggtctg | tttatacctc | antcaagatte | tattttcatg taagaaatag | catcacagaa | 120 |
| | aagtcaagat | gggcaactca | gatggagcag | cttagtctca | cagtttgctt | atctatttat | 180 240 |
| | tttatttagt | gccaaatgta | ttccatttta | aaagtaagcc | agagtgagtc | aaggcatata | 300 |
| | cacactttct | cacaaaactt | cctaaacaga | tttgggggtt | taatatgtcc | aactcctcat | 360 |
| | gaaatatatt | caatccactt | aaatatattc | catctttta | acataaaatg | taaagcttag | 420 |
| | cacccatcat | taatttatgt | ctctgtttta | tccagtggtt | aaaaaaggat | tctacctctt | 480 |
| | tagtcctcac | tgttaaataa | aacccaatca | tagtaagtga | ttaactagca | aaaagtaaag | 540 |
| | tacttatag | caaatttcta | gatcattaga | aaagcactgg | tagttgtaca | atatcagtgt | 600 |
| | tttaacctac | ttatatata | gagatcatga | attcttttcc | cttagccaaa | acatgaaata | 660 |
| | tcattgcttt | tatotoatca | ataaatcttt | tacasacco | agatatatgt aaaaaaaaaa | catctcctat | 720 |
| | | cacgegacea | acadaccece | tacaaaccca | aaaaaaaaa | aaaaaaaa | 778 |
| | <210> 1010 | | | | | | |
| | <211> 1621 | | | | | | |
| | <212> DNA | | | | | | |
| | <213> Homo | sapiens | | | | | |
| | <400> 1010 | | | | | | |
| | | taggatttt | tcacatactt | gaatgataa | atgcacctgt | | |
| | ttgagacaga | ctgaatatat | ctaaaatttc | caccastasa | aaaaaaagca | tttcacttt | 60 |
| | accaagcaag | aaaatataaa | tacagttaac | tgcattaaga | taatcacgtt | aaaattatta | 120 180 |
| | ctatgcagca | cagaacttca | ttcttatagt | attettaggt | tcaacctttg | aatcaatttt | 240 |
| | accactgatt | aaataaatga | ctcaaagaca | tctgtaagtc | atgctgctgt | gttttgaaag | 300 |
| | tctttaacta | aattaagatt | gcagaatgat | agtgattatt | caattagatt | ttaaqtaaqq | 360 |
| | attgtgatat | tagaggctgg | aaatccttat | tttttaaaaa | atcagatagg | cataaatagt | 420 |
| | taaatcactt | tcattctccc | caaacctgta | gttacagaaa | aagttttatg | ctagaggtgg | 480 |
| | gatgccaagt | tttcactatc | catgaagcag | cgctgcatgt | cactaggtaa | cacagatcca | 540 |
| | cagatggt | gtttacattt | gatttatttg | ggatcttatt | gacatcaggt | atacttggaa | 600 |
| | caccattat | ttctacctat | gcgtatgaat | ttaaagctat | tttttgtaaa gtttgtttt | tatttctaat | 660 |
| | agtettattg | gaaatctatt | ttatcactot | adcttagcca | gtgtggattt | cagageetgt | 720 |
| | caaaacatta | accacaaaat | acagcaagtg | cacctatatt | caccattaac | ttatatagga | 780 840 |
| | agtccatttt | ttcctgtaca | ctacaaacaa | aagatatatt | agagactttt | gaaaaatggt | 900 |
| | gaaatacttt | gcttcagaat | tggaatgttt | atattatata | gaaatcttca | aaggtaggat | 960 |
| | tattaaatag | caaagaataa | ttagaaccca | catatctttt | tttgtgtgga | tggggaaaat | 1020 |
| | gttttaaaat | ccagttattt | aatatgagtt | tgagagagaa | aattgttttt | taaaaatata | 1080 |
| | tgtgcattga | aatgatggca | atgcttatag | tatgatcaag | tatgaaagga | actttaaatt | 1140 |
| | cttatattta | cttttctctc | agtaaattgt | taaattttca | ctcagcaaaa | gattggcatt | 1200 |
| | tgttaagtgt | tctatattta | gtactaaaat | cacagtcatg | aaatcatagt | cataaaatgg | 1260 |
| | tatttasses | gcagtcatcc | gtgtcattta | tcattttgta | atattaaatt | atggcaattt | 1320 |
| | ttaasttatt | tatataa | acaccggaaa | gtcattactc | agtgatttgt | aatttgggac | 1380 |
| | cataataeat | calcuayaga ctcatcatta | tacacacata | ccttgtcagt | aactaatact | gcgctgccat | 1440 |
| 1 | ttcagtgggt | tagaaattt | cacayadatg ctatatttat | tatattanaa | gtccctctaa cagagtgtca | tgttgcatgt | 1500 |
| 1 | tgctgtttac | tqqaaaaaaa | aaaaaaaaaa | aaaaaaaaa | aaaaaaaaaa | Laaaataaaa | 1560 |
| | 5 5 | | | uuuaaaad | uaaaaaadd | aaaadadddd | 1620 |

| a | | | | | | 1621 |
|---|---|--|--|---|--|--|
| <210> 1011 <211> 962 <212> DNA <213> Homo s | sapiens | | | | | |
| <pre><400> 1011 ggcacgagtg a atgcccccca g tcaccctggt c acagctttgc t tcctgttaag g gctcagcagc c gcgggtggac c actgcatgag g ctgcagtgag g ctgcagtgag g ctgcagtgag g ctgccttgc c ttcccctgct g caccctcagc a tgccctttgt g cttctgggat g ttgggcacaa a tagtattcag t</pre> | accacccage gccaacage ggggtggtg aaggcaggg gagtgaagg gccacagtg gctaccage ctgagcagg gctaccage acccttca tcacctggc gcatctgct ggggcgct gcggcggct | gactccatgg gtggctgtgg gctgggtggg gtgtggaggt ctgtgtctct atcacctgct agctgctctc acaagcggat gagcctgggg tccccctgct tcccatgccc ctcaccgccc ggtagacacc aggctttgga | tgggctatgt taaggagccc cctggtccag gggcctctct gttgcaggta ccccatgtac tgacatggga gccactgctg tcctggactg gggtgctggg tcaccatcac acccacaggc tttgctttct gttgtttcca | gttggggccc tcatatacac tctgcacaga ctgcctgtgg atgtatgtac agctatgacc gacccaagg gatgtcaaga cctggggccc tctccatttc ctcactgccc actcatggga ctagccctcc tggtgatggg | acagacacce gtcccactg gccttcctgg agaagaaaa cagctgagga tggtacatgg cgtgacctga tgccatctgc tccctccacc ccaggccttc agaggctttc tgggctgggc | 60 120 180 240 300 360 420 480 540 660 720 780 840 900 960 |
| <pre>aa <210> 1012 <211> 841 <212> DNA <213> Homo sand</pre> | | J | | | | 962 |
| <400> 1012 ggcacgagct cragggactttt tratccccaga gragggactttt tratccccaga gragggacta tratcctggagaat graggggacat graggggacat graggggacat gragggacaa argcctgcacc tracctgatctgat craaataaaa craaataaaaa craaaataaaaa craaataaaaa craaaataaaaa craaataaaaa craaaataaaaa craaaaaaa craaaaaa craaaaaaa craaaaaaa craaaaaaa craaaaaaa craaaaaaa craaaaaaa craaaaaaa craaaaaaaa | gtgcttggt agccccatc aggcagctg gtgttcctg tgcatcttc ctcctcacc gtgaaggcc tacgggaca tgttgggct gagtgttca atgttatag tttcttggg | taatttgggg ctccctctgc gacatgacat cctgcctggg ccctttcctt ccatgggctt tcaagatgcc agctacaggc cctcttcctc tcctgatggg aataagggta ccacacctaa | ggtcatggag tcccgggcat ggctgctctg gagtccaaga agccttggcc ctatctcagc tgtcctgtag tgatttgtct ccttatggag cttttacatg tccaatcttt aatacgctaa | gtcagaggtg gggcacacag gcagcttgtg gaggaagggg cacctcgcca cttttccact gtatctctgg cttcatagtg gtagaatttg tgtgtatacc ttgcttccct cactaatgat | agatgcagcc gacaagtgtg ccacctcgtc gcaagggagc cacgatctca ttggcaaccc tgagcaaggc tagattgcag tgtgtgtcaa catgtaacta gggccacatt aactggtgag | 60 120 180 240 300 360 420 480 540 660 720 780 840 841 |
| <210> 1013 <211> 458 <212> DNA <213> Homo sa | apiens | | | | | |
| <400> 1013 ggcacgagta to cagaataaat to agaggagaga to cacgtacagt ag tggaatgaga gg tggttttgtg tg aaaattagtt gg | gagaccatt ttggttata ttcatttgg tttttgggt gtatttgta | aatctaatat aattaaaaag ttggttgtac ttgggggttg taaattttct | aatacttgtt gttgggtgat tacctctcag ttttttgtt gtataattag | catgagcact cttaagtgcc aagtaaaatt gttgcttggt cccaggctga | gaaatcctga tcagttaatg tgtcacctta ttggtatttt tgtaactata | 60 120 180 240 300 360 420 |

<213> Homo sapiens

<220>

<221> SITE

<222> (1424)

<223> n equals a,t,g, or c

<220>

<221> SITE

<222> (1426)

<223> n equals a,t,g, or c

<220>

<221> SITE

<222> (1433)

<223> n equals a,t,g, or c

<220>

O

181

...

ļusta

<221> SITE

<222> (1440)

<223> n equals a,t,g, or c

<220>

<221> SITE

<222> (1476)

<223> n equals a,t,g, or c

<400> 1014 60 gcgtccgaga caccacccaa agagagcatt tgctgctgct tcccagaact gtccaacaat 120 accttagcaa caccaagagt tgggccctag atgggcccag cacattcaca ggtcacaccc acttecetge aaaacceace ceeteceage etecteetga etetaageee teetetteet 180 ctacctctcc agtgtatgtc tgtcacccc catttcacca gagcgtcctt aggggctggg 240 ggtgggtttg ttaatggggt ggaggcaatg atgggttgga ggatcttggc tataggggct 300 gtgctgactg cagcaggtag gttgggtttc cctcttcctt ccctaatctt ggttctctac 360 cctcctttcc actcctcacc tgattctctc tcttcctcct ccttatatct gtgaggcaga 420 aggcatctga agctcatatt agcccccatt gggtgggaat taggagtggg tagttaactc 480 agggagactt gagataccct ggaaaaaatg ctattgagat gtcctgacat taggcagggt 540 600 ggatggaaca agaaggagca agaaaggaac ctcaggcaga tgttaggaca tggacttgat 660 catgtggcct gggagtttag aaatggggag agacatecte ctagatcaga tegtgggete agtaggcatg ttgattccca gggagaggtg ccaggaacag catggtaaag aatgtactct 720 tcacagetca catececagg ttgctgatge cacteactee ceeteteetg ecategagtg 780 gccttgccgg acacatcacc ctacctaaaa agccagtaaa tgagaacctg tcagctatag 840 ccatcatttc tgagatgcga ttttctttgg gattgagctg cagtgggcag tggctcctta 900 cactgtaatt ttaattctct gcctgcccag cctctctgtc aaagtagctg gtgatctata 960 aagatgctaa aaggcaccag gggactttgc catttaaagg actcctgcag tgaattcttt 1020 tgtaaaatga atatggcacc ctaatttatc cactttctaa atttgggtcc atgggggtgt 1080 1140 ccagggcatg cttatgtgct gtcaccagca gacaaacaga gggaatggaa tctgggggtt 1200 ccttccctgc tctcccgcca tactcaggat accctaccat aagtgatttc ctctcactga 1260 cttgcagaaa atgtgtgaga tacccagcaa gctaagaagg cagttttgct gggtatctca 1320 tacccaaggc tggggtttgg gtgatctgag aggttagctc cttgatccta ggatggaagg gagagcttat atagaagctt ttacttggaa ggttttgtat cctaaggtca gacatagcta 1380 tattaccaag cctaaatgcc atgtggccca ggaaataatt tggncntttg ttntaaaccn 1440 cttgtggtag gtattggtct ctctgcaact cagccnttaa ttagaaatta gactgagccg 1500 aataaaaaa aaaaaaaaa aaaaaaaaa aaaaaaa 1537

<210> 1015

```
<211> 519
<212> DNA
<213> Homo sapiens
<400> 1015
ccacgcgtcc gcacgtggtt agtggcatct atattggaca gggcagatct agagagaatc
                                                                      60
ctgtatctaa caattttaat ttttttccct ttatgctgtt attccttacc tagagaaaca
                                                                     120
atttccctcc aaagttcctt tgaggggtct gtttaggcca ggccaacaca agtgacctat
                                                                     180
gtggatttta gcatcctttt tttgaaattt gaggttttat gaagcttgag tttttctgga
                                                                     240
tatttttagt aatttgctgg tgtgtactta gctcagatac ttgattgcaa ctgtgttggg
                                                                     300
tcaactattt ctaatgggac ttttccattt gcatgtacag tcactggaaa ctgctgggca
                                                                     360
gagaaactct aaaaggtagt tggggcacac tttttccacc tgtcagattg gtgaagaatt
                                                                     420
ggtgaggctg tggggaaaat ggcattctcc cacttttgat ggatatgtat ccaaataaaa
                                                                     480
gtcattccca tgctttcttt caaaaaaaaa aaaaaaagg
                                                                     519
<210> 1016
<211> 1734
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (191)
<223> n equals a,t,g, or c
<400> 1016
                                                                     60
gctgtgttgt tgagtgcaga gtctagggcc argtggaatg tgtcatcttg tgargaaatg
tgtttgtgtt gttttttact taaaaattgt cagcgtagtg gagaggggaa tgacagaagt
                                                                     120
                                                                    180
aggaaggcac cccaccattg tgtagtgagg cagtatacag agaggtaagg cagccggggc
                                                                    240
agatggctgc ngccctgcac ggggcttttt tctggatctg gttgcacgtg ctgtgttctg
agaggcgagg ttagagccca gatcatctct attcatgtga cacagccatt cccaaaagga
                                                                    300
cttagagcag agggaacttg accccatct taactgtctc ttttgaggat gagcagagtt
                                                                    360
ctcaggtgtg ccccagcct ggtttatata aatgtagctt taatctaggt gtgagcagat
                                                                    420
gtctgttggg gatctctgga caccaggcct actctggagt cagagagggg acccgccatt
                                                                     480
tggctctctg gtacatgtgg acagtgtctg ctcctctact tgtcatggct gaaagtactg
                                                                    540
cagctgtcat gacattctct ggtgtagaag aaagaacttc ccagagggtt tcctggcact
                                                                    600
gcggaaagac ccagaatgag ggargccctk ggacccacag aggcccctgc aggcatttca
                                                                    660
gcacgcctcc ctccgctctc acttgttcct cagttctctc agaaatggag agaaatgacg
                                                                    720
gtccttattc cttcttttt tacaggtggg cagatggaag agggtcgatg ttttgctcag
                                                                    780
gatcacaaac agaggtcctg aggctccctc tcctcactag gatccaccct sccccaaagc
                                                                    840
aaattttcct tttgcctgtt cactctgtga agagggctcc ttgccaagtc acccagcatc
                                                                    900
ccctcccctc ctcctcctct ccttccagcc caccctcatc tcaggcaatc acatatacag
                                                                    960
gtaacaggtg ttctcagcct catgaaaaac ccatgctagc tgtgacattg aattgctggg
                                                                   1020
ctggcagaca tctgcggagg agcaaaaggc atatttgctw cttmctgcct ctgcgcggtg
                                                                   1080
ccagaraget aaagteatgg tetaacaggg ggageatget gtetgagaga atgktetget
                                                                   1140
agctttyaga tgcacaggkt tataaaaata ccaccctgsc atttaaaaca tgtttaaaat
                                                                   1200
gttgatagaa aacaatgaat cgtatcctta gaaagacaga ccctagtgaa agaaacacta
                                                                   1260
actcacacag gtagggtcta gcttccataa catttaagtt tattctatgg aattgttcat
                                                                   1320
tggtgctcct gttttagtta cttctccata gacttgtttt tcccttgact aatcaatgcc
                                                                   1380
atctggtgcc aggtggtatc ctgggtgtag cacagtgaca gggtggagac tgccctggcc
                                                                   1440
gtggcatgtg cagggggcgt tcttgagcct gtcttctggg agccctttct tttccttttt
                                                                   1500
ccctccttta ggttgaagac ttcatcattc cctgcgggca gtttctctgt ttttcctatt
                                                                   1560
ttcttttcct caagaaaaat gtaattttta agtaacagaa ttgktttctg tgttrcagca
                                                                   1620
                                                                   1680
tttaagttgc tgagttgaga aatcatggct gagtttgcca agtaaagttt ttaaagcaaa
1734
<210> 1017
<211> 1908
<212> DNA
<213> Homo sapiens
```

```
<220>
<221> SITE
<222> (1868)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1887)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1904)
<223> n equals a,t,g, or c
<400> 1017
cttttcttgt tcctttcgta gcctgcattt tccagtgtta tttgtacctg ttctacagtc
                                                                       60
cagccaggac tatgaaggtg gtgcttatgc tgctctttat ttgcctgggc aacatgtacc
                                                                      120
tgcacgggct gaggaacctc tggcaaatcc ttttccacat aggagtggct tttctgtctt
                                                                      180
catatcagat actaacaagg cagcttcagg agaagcagtc tgactgtgga gtatgaggat
                                                                      240
gacactgtga tgaatggatt ctttgatttt cttttgagga tcaatctatg tttctctttc
                                                                      300
tgcttctcta ctttacactc cagtttccat ccttttcagc caactggact gaaaaaccag
                                                                      360
gaattgggga tgttaaacag ttgcagtgga agtcatgagg ttgcttgata cccagccttg
                                                                      420
gttctgtgcc aagcattact gcaggatctc cagccagttc agcacgttta cctaggacag
                                                                      480
ctggatctgg gggctcatcc asaaagagct ttattggaag agagaaagga aatattttgg
                                                                      540
tcttttaagt tgaatgatac agtaaaccac ttgattcaat aacactggtt ttagtcattg
                                                                      600
agagttgtct ccaaggaacc actttaaaat ccaaatcagc tttcagtcta aacataactt
                                                                      660
gattagtttt ttttttcaga gggtcagtac aggatgaatt aaaaacctaa aaatatggtt
                                                                      720
cataaatgta agctagataa attttgttta cattttttca atatcttagg ttcgatatac
                                                                      780
ctttggaata tttaattata ttttggatat aaattggact tcatttaggg tgagggcaaa
                                                                      840
cttaagctga gaaaatggtt aagaaatctg agtttattta atttatatgt aaccttttat
                                                                      900
agtggtggga ctgtttgggt acagagatgt tttatattta tttgcagggt atatccqaat
                                                                      960
attttaaaaa ttaattgaat aaccagtact tctagatgat aagtttgtca gcatgagcag
                                                                     1020
aaatgagaat ttcaggatta cttacaattg accacaacct ggagtaggtg aatgaacatg
                                                                     1080
gattcagtgg cactttacag atccgcttgg gaggggctgc tgtcatcagc cttttcagta
                                                                     1140
gagctgagtg cctgttgttt taatgatgat gactactgta ccctgtgtac ctgttcccag
                                                                     1200
agegeeteea aaattaatta eteetetgea eettteeeag teatettaat tagettgagg
                                                                     1260
gcctcatttt ttatgaacaa gagttaagta tctgttaact ttttaaagct tgatagagat
                                                                     1320
ataattaaca catactctgg aaagttactc tctttcactg tcaaaaaaatt gattgatcac
                                                                     1380
agttttccaa aatatggttc tggataagat cccttaggtt tcccgaaatt tcagcctggc
                                                                     1440
ttgttttgta ccacgcagga ggtcattttg ggagtttgct ctttggattg ttcttggtag
                                                                     1500
aagtctggaa tctgaatagt tcaaccacag ttgcatggaa cactttgagt gttcaactgc
                                                                     1560
attatgtggt cttgataaat ttttaaaaaat cctattttga tagtttttaa aagtggaaaa
                                                                     1620
ccattacaag agttgagtgg atagggaatg taagaatgta gttttagaaa aattcaatta
                                                                     1680
tatttggtta tcactggtat tgtattgtta ttgagctacc ttgttatcat tttaagaaaa
                                                                     1740
ataagtttat atactgggaa ctatgttggg aaaatgttgc catagtaact ttattttta
                                                                     1800
taatagaatt ttctattttt gaccaaacat taaaatattt gggatatggg ccaggcmtgr
                                                                     1860
tggcctcngc ccgtatttcc cagcacnttg ggaagggcca agcnggtt
                                                                     1908
<210> 1018
<211> 513
<212> DNA
<213> Homo sapiens
<400> 1018
ccacgcgtcc gccccctgt cttcccccac atctttgcca gaggtgtgac atggtcaggg
                                                                       60
ggcccatctg ctactctttc ccaccagctc ccctgttcca gttctggttg ctgttagttt
                                                                      120
ccctgaggta tttgcaacca ccatggctgg gtaaccaccg atcagcacag ctgtccctt
                                                                      180
ggtctcctgt atcccagtca ctagtcctcc ctggtccacc ccaccctcat cctcaggagc
                                                                      240
cacagccatt tettagaggg tttcaaaagg acagcetttg gegeetttte ettetaacet
                                                                      300
ttgagtccag ccctttccag ttttcattca ctcgaagtaa ctgcactcaa gctgtgctca
                                                                      360
```

| | - | _ | | aaacacaact | | 420 |
|----------------|--------------|------------|------------|--------------------------|------------|------------|
| | | | | cagatgcaaa | agggagaata | 480 |
| aacctgaata | ttattaccaa | aaaaaaaaa | aaa | | | 513 |
| <210> 1019 | | | | | | |
| <211> 1030 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1019 | | | | | | |
| | cacacataag | aaaaaatgca | tagatctgaa | atgtgtcact | agagagtttc | 60 |
| | - | | | cctgaagagc | = | 120 |
| - | _ | | _ | gcatggggaa atataaatgg | | 180 240 |
| - | | _ | = | aggttaattc | | 300 |
| - | | | _ | catagacaga | | 360 |
| | | | | aaagagagga | | 420 |
| | | _ | _ | tattttcatt | • | 480 |
| | | | | atgcagagct aatatgaagt | _ | 540 600 |
| | | | | ggcataattg | | 660 |
| | | | | attgtattag | | 720 |
| | | | | cacgaggtca | | 780 |
| | | | | aatacaaaaa gaggcaggag | | 840 900 |
| | | | | ctgcactcca | | 960 |
| | | | | aaaaaaaaa | | 1020 |
| gggcggccgc | | | | | | 1030 |
| <210> 1020 | | | | | | |
| <211> 1063 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1020 | | | | | | |
| | gaagaaagta | actataaccg | gttctgaact | attaggtgaa | gagatgcata | 60 |
| | | · - | | tagcaaagat | | 120 |
| | | | | gcattcttat | | 180 |
| | | | | ctattctagg tttttggctg | | 240 300 |
| | | | | acatgtgcct | | 360 |
| | | | | ccttgtaatc | | 420 |
| | | | | tgaaaccagc | | 480 |
| | | | | gggtgcctgt ggtggaggtt | | 540 600 |
| | | | | aagactccat | | 660 |
| | | | | ccaacccgcc | | 720 |
| | _ | | | gctggactca | | 780 |
| | | | | agatcacttg | | 840 900 |
| | | | | actaaaaata ggggaggctc | | 960 |
| | | | | atcgctccac | | 1020 |
| | | tgcgtctcaa | | | | 1063 |
| <210> 1021 | | | | | | |
| <211> 1021 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1021 | | | | | | |
| | gctttgtttc | tggatgtttt | cagaggatca | gagctctgca | caggatcttt | 60 |
| - - | _ | | | - | | |

```
atgcttgggt gaattcttgt gtttggtttc acagatgcat atattagtag gataattttt
                                                                       120
ggtgttgcag cttaggctgt gatccagtag atggtgtgga agagtgatgg ccaatagcta
                                                                      180
ggctgatagc cagtcacact actcttttgt atctcctcat gttggcaggt gtgctctgca
                                                                       240
gtcgggggtg gagacaaatg gccccttcac caggtctgct catgagcctt ggggagaccc
                                                                       300
ttttgatcac cacttatgtg cccgtgtttc ttttgttagg tgttccagga tgcaggccc
                                                                      360
ctctgggaaa ggctgtaaca ggaagatgtt cttcaacctt tctggattga ccctgtggag
                                                                      420
ggaggcatag cttgttccca ccctggcccg ggaacccatt tgtctcaccc cttgccacac
                                                                       480
tctgagggtg ggggatcctc cctcactcaa gtgccaacca cagatcctgg ctttgtattc
                                                                      540
ctgagctgct gtactgtggc cctggggcac cagaacatcc catggctctg tctgaatcca
                                                                      600
tggttggatt ctggctgcac tggggattct atgtgctcca gatcaccaga aagtactcag
                                                                      660
gtggagcaat gcgctcaggc tgggccaagg agctgtgctg tgcacctgct cctgcaggtg
                                                                      720
gctaggcatg ggccctggga aaggctacat gtatgaagct tgcagaacag atgtgcatca
                                                                      780
ttcccaggga agccagccct gctctctct ggctggaagg tcagctgggg ccagcgcctc
                                                                      840
ccagaaggga atagaatcct gggggatgac catctgtggc tgctctctgc tggactgtcc
                                                                      900
tgtgcacaca aactcctcag ctccatgctg tctgaaggcc tgtctttgcc tgttccttgg
                                                                      960
ggagatecce etecagetee caegteettg tgtgatgeag ggteeeetgt agetagaate
                                                                     1020
ccagagctgg tggcaagagt gaggcatcct tcagttccct cactcactgc tttcccagga
                                                                     1080
gctgtttggg ccaggaacta gcctaatagc gtttgggtac cctgtcaggg ttcccagctt
                                                                     1140
ttccctttca gcctcagctt cagcatcact tctacccacc cctggctttt tctttttgaa
                                                                     1200
gagctaccca aattatggtg gcttacttga tagtttggtc tctctcagtg ggagcaacac
                                                                     1260
atcctggctg catgtagtcg gccatcttgt ttccgcctcc tgctgtcttt gaggaatgct
                                                                     1320
cagccaccat ccagctgggc cacatctgtc tgtcttagca gcagcagcag cagcagcagc
                                                                     1380
agcagcagga ggaggaagac agcaatgatg aggctgccta ccgagcattc atgaggacct
                                                                     1440
cctatgagaa gaacccaaag ctgttagcat ccctggctgc tgaataggtc tactgtgcct
                                                                     1500
ggcaccccaa gcagccctcc ttacagcctt gcagccaagc ctcttccagc ctcctcctc
                                                                     1560
tccactgcat actaagtaga tttcttcaag gtcaggcata gtaaattgtt ggagtgggat
                                                                     1620
tgacacctag gtctacttag gctgtaaagc tacagcatgt aaccacgaca tgatatgcta
                                                                     1680
tcatttctaa aatagaataa atttaaggaa actaaatatt caattcttga agatagaaaa
                                                                     1740
aaaaaaaa
                                                                     1749
<210> 1022
<211> 138
<212> DNA
<213> Homo sapiens
<400> 1022
cccacgcgtc cggggagatg aagggctggg atggaaagag ctttattctc agtgcctcat
                                                                       60
ettttggttg ttttggattt tacaacatgt gcatgcattg cctacacaaa caaagacact
                                                                      120
aatttgaaaa aaaaaaaa
                                                                      138
<210> 1023
<211> 1985
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (310)
<223> n equals a,t,g, or c
<400> 1023
tacttacttt gcaaagctct tttacatacc ttgtgttatt tgattccaac aactcagagc
                                                                       60
ggtccagtag gatggataat gttcttattt tacagatgag gaaactgaga tacaggaagg
                                                                      120
tgagttacag aactctggct actgttctgc tcatctccca gccccgtgaa ttttcatctc
                                                                      180
tctcttcccc cagtttattt atggagattc ttagttcctg ttcagattgt gatgagatcc
                                                                      240
aattcatgga agatggatcc tggtgcccaa tgaaacccaa gaaggaggca tctgaggttt
                                                                      300
gccccccgcn agtactgggc tggatggcct ccagtacagc ccagtccagg ggggagatcc
                                                                      360
atcagagaat aagaagaagg tcgaagttat tgacttgaca atagaaagct catcagatga
                                                                      420
ggaggatctg ccccctacca agaagcactg ttctgtcacc tcagctgcca tcccggccct
                                                                      480
acctggaagc aaaggagtcc tgacatctgg ccaccagcca tcctcggtgc taaggagccc
                                                                      540
tgctatgggc acgttgggtg gggatttcct gtccagtctc ccactacatg agtacccacc
                                                                      600
```

| tgccttccca ctgggagcc | g acatccaagg | r tttagattta | ttttcatttc | ttcagacaga | 660 |
|-----------------------|--------------|--------------|------------|------------|------|
| gagtcagcac tatgggccc | t ctgtcatcac | ctcactagat | gaacaggatq | cccttggcca | 720 |
| cttcttccag taccgaggga | a ccccttctca | ctttctgggc | ccactggccc | ccacgctggg | 780 |
| gageteceae tgeagegee | a ctccggcgcc | ccctcctggc | cgtgtcagca | gcattgtggc | 840 |
| ccctgggggg gccttgaggg | g aggggcatgg | aggacccctg | ccctcaggtc | cctctttgac | 900 |
| tggctgtcgg tcagacatca | a tttccctgga | ctgagttccc | tggattatgg | aaacttcgct | 960 |
| gtcccccaac actgagcaag | y tatgctgtgg | agtcccaacc | ccagctactc | tgatccctct | 1020 |
| gggggctctg gccaagggc | c agacagacct | tcacagatgc | ctacttttgg | cctcatctct | 1080 |
| gcctgacaag gcagcaccca | a aagggttaat | atttaacctc | tttttaagga | cactggggtc | 1140 |
| tgtttctggg aaatgttctt | : tagatggtgg | cacattcctt | tgggtatgtt | aacctaggca | 1200 |
| gtgggaggca aatgggatgg | , tatgtgagct | aggagaaggg | ctgaaccctc | agcettgact | 1260 |
| atgtctagag cctcttgggg | g aaggggcacc | tctcttgaac | cccaaatgct | ctctcttctt | 1320 |
| attacccaaa cccatggcto | : tatttcttct | tcacatccat | tgtctcttca | tqtctattcc | 1380 |
| attcccttcg gccaaacaga | ı caggtggaaa | aactgagaca | ggcagtttca | gagatggaca | 1440 |
| gagaacttta ttttggattg | , tggatgtgga | cttttttgta | cataaataag | aaaaaccaaa | 1500 |
| atactccaaa gatgacttco | cctgcctcct | actccagtat | gacagaggag | gatgtaaggc | 1560 |
| cttagccatg atctgcaggg | r gtctgggagt | caggcccggc | ctattqcttq | ggtctctctc | 1620 |
| tatttatata tctaagttca | cagtgtttct | tattcccccc | taagcttcta | gaggeteatg | 1680 |
| gccctgtagt taggcctggc | : tcattctgca | cctttccagg | gaggtggaag | gaccctgtgc | 1740 |
| cctccttccc aatcttcttt | ttcaggctcg | ccaaggccta | ggacctatqt | tgtaatttta | 1800 |
| ctttttattt ctaaagttgt | agtgaagctc | tcacccataa | taaaggttgt | gaatgttcaa | 1860 |
| aaaaaaaaa aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | 1920 |
| aaaaaaaaa aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | 1980 |
| aaaaa | | | | | 1985 |
| | | | | | |
| <210> 1024 | | | | | |
| <211> 1576 | | | | | |
| <212> DNA | | | | | - |
| <213> Homo sapiens | | | | | |
| | | | | | |
| <400> 1024 | | | | | |
| gtcgacccac gcgtccgcga | cctatcacag | acaatggaat | tcgtcagtgg | tggtaagact | 60 |
| gaaateetga tgetttteae | acttcttgtc | tcttgctatg | tatttctgcc | tctagccttg | 120 |
| ccatgttttg ccttttttt | ttctttttgg | ccaattcctt | tttatatgtg | cccacaacag | 180 |
| aggtggggag acacggagca | ccctgggtcc | ttcccagcgc | tgctgggcag | gccccgtctc | 240 |
| caggccccag ctgttgaaac | tttgaagggc | aacaacaac | catccacact | gccggaccct | 300 |
| aggctgttca gggaggcagc | tcatttccac | cccggcccca | ggacacccag | cctgtgcccc | 360 |
| acaaggatct ctctaaatgg | gagggattga | ggctactttt | ctaccaaacc | ctattaagta | 420 |
| gtaatgtggg gaaacccact | gtgtcagtgc | aggaagccct | agacaaatgt | tttcaaataa | 480 |
| atttcactgc ccagcctgca | cagatttcca | tttgaagtac | ttcccatcca | ccctgacacc | 540 |
| caaaggggtt tttttgtttt | gttttgtttt | tgagacaggg | tcttgctttg | ttgcccaggc | 600 |
| tggagtgcag tgacgtggtc | atagctcact | gcagcctcaa | cctcctgggc | tcaagtgacc | 660 |
| ctcctgcctc agcctcccaa | agttctgaga | tgataggcat | gagccattgt | gcctagccta | 720 |
| ttttgatttt tttcttagag | tcaaggtctt | gctctattac | ccaggctgat | cttggacttg | 780 |
| cgagccacca tgcctggctg | ggttttttaa | aaatagaatc | tcactgatag | cctgcaagaa | 840 |
| acagatgcag tgcctgcttc | cgtatcagtc | caaggagccc | tcgtgtttgc | cacctttacc | 900 |
| tttgaacctc cccctgcctc | cctgcctgtg | tccgcttttg | cagctcaatg | cagccatgac | 960 |
| aaggaaagaa aagacaaagg | aaggccagag | agccgcgcag | ttctctgcag | gtgcagatgc | 1020 |
| aggcagtgga ggtggcctga | gcaggcagaa | ggacaccaag | cgccctatgt | tgcttgtcat | 1080 |
| tcatgacgtg gtcttggagc | ttctgactag | ttcagactgc | cacgccaacc | ccagaaaata | 1140 |
| ccccacatgc cagaaaagtg | aagtcctagg | tgtttccatc | tatgtttcaa | tctqtccatc | 1200 |
| taccaggcct cgcgataaaa | acaaaacaaa | aaaacgctgc | caggttttag | aagcagttct | 1260 |
| ggtctcaaaa ccatcaggat | cctgccacca | gggttctttt | gaaatagtac | cacatotaaa | 1320 |
| agggaatttg gctttcactt | catctaatca | ctgaattgtc | aggetttgat | tgataattgt | 1380 |
| agaaataagt agccttctgt | tgtgggaata | agttataatc | agtattcatc | tatttattt | 1440 |
| ttgtcactct tttctctcta | attgtgtcat | ttgtactgtt | tgaaaaatat | ttcttctata | 1500 |
| aaattaaact aacctgcctt | aagaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | 1560 |
| aaaaaaaaa aagggc | | | | | 1576 |
| 010 100- | | | | | • |
| <210> 1025 | | | | | |
| <211> 2238 | | | | | |
| | | | | | |

```
<212> DNA
 <213> Homo sapiens
 <220>
 <221> SITE
 <222> (393)
 <223> n equals a,t,g, or c
 <400> 1025
 tttttcaaaa gcagagcgta gaattaattg tagcagctgc ccccccacc caccacgagc
                                                                       60
 agcgcccccc caacactatt ttaataaacc attaaaaaaa acacattttc ctgctggctg
                                                                      120
 gccacattga gagtgctttg tgaaaagaaa aaacaaagac attcacaaat cagataaaac
                                                                      180
 tggagaatga catttgtctg taaatggctt cttggtctgg aaatggcgtg gtttctttt
                                                                      240
 ttttttttt ttttttgtc ctcctcaagg tgggaggggg gattgagagt gctctaagga
                                                                      300
 gacttttcct ccaggtggga agagataaaa agacattaat tagttgttta tcaagtgaca
                                                                     360
tttagttgtt tggttttggg ttttctttt ttnattgcga tttttcctct gattaaaaa
                                                                      420
ataataataa aataaaaaaa ggttaactat aaggagatgg cctttcctcc tttttttct
                                                                      480
taaggtgctg ttttggggga aaaaaatgta atgaaatgac caaaagaatt acacagcatt
                                                                     540
aattaaaaat ggaagttttc cacttccttg ataatttggc tatctgaata aatttgtgaa
                                                                     600
tttgctaggt taagacctag ttcgtggtca catttcaaca aaacagcttg agtataaaga
                                                                     660
aaataataaa aggctgttct tatttatttt cctttggtgg cttttggttt gctctttttg
                                                                     720
cataagtcat gactttgttc tcctgggtcc agatttataa aagcagaaaa ttactaatta
                                                                     780
agtcaaaata agtgtctttg gtgtttatgc atttgcaatt tcagtaatta aatggtacat
                                                                     840
gtgttgctgt cttgcctaaa acttttaaag gcagaattat gctgttggga tattagtatg
                                                                     900
cgtataactt gatttcaaag tataaatctg gaaaagtcta gaatcttttc tgtgaatgct
                                                                     960
atctcagtac tactttaagt caagtgtgat gctaatgata tcttaaaatt tccaacacct
                                                                    1020
tttgtgcagt gatcacaaag tctccactta atttgagact gttactcaga acacgccttg
                                                                    1080
cgtcacgggg gctaatctaa gtgtcctagt ctatatgact acattacatc atgatgtatt
                                                                    1140
gattgcctct ggcctaggaa tctgcagctt aagccagtga cacaayattt tgcattttta
                                                                    1200
aatggtgatt ctcaccaaat aatgcctccc cacaaaagag gaaacctaat aatgccccaa
                                                                    1260
atcctctttt tactccatct taatgacata aaaattaagt gaattagaga actacaatga
                                                                    1320
tcttaaaata atttttcags cacatttcat aaatgtggaa actgaggcac ggatctgttt
                                                                    1380
ttgcctatga aagataggtc ctgtaactgt tacacagttt aacacttctg aaattagaat
                                                                    1440
attagagatc ctgctaaata ttacgtattg tttccttggc ctctcttaat agtgccattt
                                                                    1500
atatttttaa tttaccagag ttaggctcat taagatagtg tttgctttga aatcaatgtt
                                                                    1560
tctgtggaaa ctaattttaa cttttacaga tattgattac gggcttgtga aaaggcaagt
                                                                    1620
1680
araaaraaaa aggtaataac agatttgtgt ggaaggargg caaaaaaact tcmcacgtgg
                                                                    1740
attatetgtt ggagaatgtg cattgcaaaa rgatgcaaat agcaateege eetetagett
                                                                    1800
tgatggaaag gtgtttttcc catgaaccgt aggggatttt taccaagtga acgtggtttg
                                                                    1860
aaatggaggg catgttgttc aaccctgtgg tttgggaagg gctgggactt ttcaagttag
                                                                    1920
gtcttcccag gaggagttcc ttttgagaaa gttggtccaa ggcactttac ggtgtttgcc
                                                                    1980
ggttcccaag cgatgggcca ggactgttgg cttaaaggtg tttccaagtg cgattttggg
                                                                    2040
ccccttcccg caattgtccc ggggtttctt tagagatgtt ggaagggtgg tttggaaaac
                                                                    2100
cctgggggtt ttccggggcc ccctaacctt tatggggacc ccccgtggac cgtggtgcgg
                                                                    2160
ttcccgcaat gttttgtggg gtcttgttcc gagtcccccc ttaaaaaaaa ctttgtcgcg
                                                                    2220
cacccggaag ggtacggg
                                                                    2238
<210> 1026
<211> 1126
<212> DNA
<213> Homo sapiens
<400> 1026
acgcgtccgc ggacgctggt gttgcatgta ctcaatacat ttactccaag attcttctga
                                                                      60
caagggacac ttttagccaa ttccccaata gctctcatca ttataggatt aaaaaactag
                                                                     120
gcctcctgtg aatttaaaaa tagattaaaa tactccctgg tactcagatg tgttcccact
                                                                     180
agctaattcc agcattggtc aacatggatc ttgtttgaag ctaacccagt ttaaatattc
                                                                     240
cttttgcaaa acagattttt agagctatgc cttgctaaag attcttccaa atagtaatct
                                                                     300
ctcctggcac aggagctaac cactgcccag gtctctaggc tcatctcctg ctgtacactc
                                                                    360
cacattcact cttccttcca ttagcactac ttgcagttcc ccaaacatgg catgcctcta
                                                                     420
```

```
tttttgcctg catacttcct gtgaatgcta tttctttatc tagaagattc tctccccacc
                                                                   480
cccacctgcc ttatctggca tcttcagaga ttcctgtgtc tctttgagat ccaatttaat
                                                                   540
tgatagttcc tttaggaatc attcctatac ttcccaaact aagataaatg ccccttctta
                                                                   600
tgcccatatc catctgggat tttgccttcc ttcatacttt atatccaata caccaaaatc
                                                                   660
tcttgtggct ctaccttcaa aatagatcca gaatctgatg acttatcatc ttctcaactg
                                                                   720
ctaccaccct ggtccatacc accatctcta gcctacattt ctgtgatagc ctcctagttg
                                                                   780
atttattett acctaettea acctageete cacaatetat tetetacatg atagecagga
                                                                   840
tgccctttta aaatctaagt caaagtcctt cctctactca gaaccacttg agttcccttg
                                                                   900
tttcactcat agtgaaagtc aacagccttc caatgtgctg ccccctctt aatactcacc
                                                                   960
1020
1080
aaaaaaaaa aagggcggcc gctctagagg atccctcgag gggccc
                                                                  1126
<210> 1027
<211> 1141
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1125)
<223> n equals a,t,g, or c
<400> 1027
ggctatgggc ttttctttat tttttctttt tttcttacct ccttttgcag ttttcccaga
                                                                    60
tctgcacctt ctgaagagca aatgcacctt cctgggtttg tccaaatgca gatcatttat
                                                                   120
gctctcttat cacacaccca cagaatgccg ctctcatacc gcaaaagcac tggcttgcca
                                                                   180
cattgtcatg tagtctccca gagacctgtc tatttctagt tgtgttttgt gaggcaggca
                                                                   240
ggagagtete etgtgattae tteetetgat eettaaataa atetttetgg ttgtttttt
                                                                   300
ctggggcgct tttctccgat tctcagaggg agcacagacc ccaagaaagg ataagaactt
                                                                   360
ctggtctctc ccagcttgtg ctcctcagag ctcatggttt cctkgcwacc aacaccaagg
                                                                   420
aaatatcaaa aggatattta aagaatcata ggtgcaaact gattagaagt ttggcaaaaa
                                                                   480
gagaggtacc tgaagggcca aaaatctgcc actttgaaaa ccaacacaca gggcacttgg
                                                                   540
ataggtttct ctctgttgcc agagtgccaa agaagatttt tcagctaaaa gaatagccgg
                                                                   600
gctctgatca agaggacaga ataataaaaa gggtttgatt agaggcagga tataggarga
                                                                   660
aaaccccakt gtgggtgggt atctagtaaa tgaaaggcca ggaaggcgat gggsgcctga
                                                                   720
ctttccatct cagctgagcc tagggcaagg aagagactta gggacttcct ttttttttt
                                                                   780
ttgagacara gtctcgcacc gtcgtacgga ctggartgca atggcacaat ctcggctcac
                                                                   840
tgcaacctcc gcytcccagg ttcaagcgat tctccttgcc tcagcctccc gggtagctgg
                                                                   900
gattacgggc tcccaccacc acgccctgct aatttttttt gtctttttag tagagatggg
                                                                   960
gttttactat gctggccagg ttggtctcaa actcctgacc tcgtgatccg cccacctcag
                                                                  1020
cctcccaaag tgctgggatt acaggcatga gccactgcgc ccggccttag ggacttctaa
                                                                  1080
taaaagactt agggacttct aataaaaatt gaaagaaaaa aaaanaaaaa agggcggccg
                                                                  1140
                                                                  1141
<210> 1028
<211> 1580
<212> DNA
<213> Homo sapiens
<400> 1028
ccgggtcgac ccacgcgtcc ggtagaatta ttgtataaat tatagaaaca tatatatagt
                                                                    60
taaattcaag tctgaatctg acctttatga ctataaattg atacgctcaa aatttcaaaa
                                                                   120
ttatacttct ttgacccaca caatggtagt agcttatggg agagtgttta tgttgtattt
                                                                   180
aagcttgctt ttcaattttt accaaattaa gggaagcaaa aatattaatt tataactcta
                                                                   240
aattattaat tctgagtgat aaaaaagatt gttttgaaat ccacaaaatt taatttgttc
                                                                   300
aacattatgg ccgctttaaa acatacagta gagttgaagt tattttacag taaacagtta
                                                                   360
tatacccatc accttgattt tactactaac attttaccat acttgttggt taatacctat
                                                                   420
ccttcattaa tctttccaac cacccatcaa tgcatcttat atctgatgca ttttaacata
                                                                   480
agttaacaat attgaatagc caaaatgcca aatttaaaat atttagaaaa acataggtct
                                                                   540
```

600

attttaaata ccctgcaata atggccaaaa gtcacatgaa ttcggtacaa gttctagcca

| catacatatg | tatccagaaa | acaaaagcaa | atcctacata | tttatattt | cagtcgaatg | 660 |
|------------|------------|------------|------------|-------------|------------|------|
| tatcagccag | ggtctgatca | gaaaaacaga | aactactgtg | agtggttcca | aaagaccaaa | 720 |
| atattaccgt | aagatttta | ttgattattt | tatcttggct | gactgtagag | tctctcattt | 780 |
| ttctgttcat | ttttattaat | agaactgaaa | tattaggggg | ctctaatatt | tgaaaggaaa | 840 |
| ataattagag | tgctgagttc | tctgtctttt | tggccttgaa | tcctttccta | tctccttcct | 900 |
| gctttactct | gtagagcagc | gaaactgatc | cctgtaggct | gtctcactga | cacttaagtc | 960 |
| aataagaagt | ctaaaaataa | tttgatatat | tgaattaatg | cagtcaaaga | ctatatttcc | 1020 |
| aatttaattt | tocagactca | taagcaattt | atcaatcctg | ctgatacggt | ttagatetat | 1080 |
| gtccccacca | aatctcactt | tgaaatatat | tccccaatat | tggaagtggg | tactootoo | 1140 |
| agataattgg | atcatgggga | cagatttctc | atgaatggt | tagtaccatc | cccttaataa | 1200 |
| takttttgca | aaagtgagtg | acttatogag | atctactcat | ttaaaaaaagt | ataataatta | 1260 |
| cctccctctc | ctctctctct | ctctctctct | ctttctcact | cctgttcttg | ccatataaca | 1320 |
| tacctactcc | ctctttatct | tccaccatga | ttggaaactt | cctgaagtct | ccccacaacc | 1380 |
| agatgttgct | atacttcctq | tagggcttgc | agatccaaga | gtcacttact | cctctttttc | 1440 |
| ttatggatta | cctcatctcc | agtatttctt | tataccacac | caagaacagc | ctaatacacc | 1500 |
| toccaaacca | gaataaactg | tacttataca | ataactcctd | tatcccgtag | cttgaaataa | 1560 |
| | aaaaaaaaaa | ogooogooca | acaacccccg | caccecgeag | ccegaaacaa | 1580 |
| | | | | | | 1300 |
| <210> 1029 | | | | | | |
| <211> 2138 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | - | | | | | |
| <400> 1029 | | | | | | |
| cccacgcgtc | cgtacaaaag | ttatgaatag | tactataata | aggaaaactg | ccagttcttg | 60 |
| cccagctagc | ctgacctgtg | actgctatgc | aacagataaa | gtttgtagta | tttacctttc | 120 |
| aaggcgtcac | aggttgcccc | tagggcaggt | acaccaggat | tcagagcacc | agaggtettg | 180 |
| acaaagtgcc | ccaatcaaac | tacagcaatt | gacatgtggt | ctgcaggtgt | catatttctt | 240 |
| tctttgctta | gtggacgata | tccattttat | aaagcaagtg | atgatttaac | tactttaacc | 300 |
| caaattatga | caattagggg | atccagagaa | actatccaag | ctgctaaaac | ttttgggaaa | 360 |
| tcaatattat | gtagcaaaga | agttccagca | caagacttga | gaaaactctg | tgagagactc | 420 |
| aggggtatgg | attctagcac | tcccaagtta | acaagtgata | tacaagggca | tocttctcat | 480 |
| caaccagcta | tttcagagaa | gactgaccat | aaagcttctt | gcctcgttca | aacacctcca | 540 |
| ggacaatact | cagggaattc | atttaaaaag | ggggatagta | atagctgtga | gcattgtttt | 600 |
| gatgagtata | ataccaattt | agaaggctgg | aatgaggtac | ctgatgaagc | ttatgacctg | 660 |
| cttgataaac | ttctagatct | aaatccagct | tcaagaataa | cagcagaaga | agctttgttg | 720 |
| catccatttt | ttaaagatat | gagcttgtga | taatggatct | tcatttaatg | tttactgtta | 780 |
| tgaggtagaa | taaaaaagaa | tactttgtaa | tagccacaag | ttcttgttta | gagaccagag | 840 |
| caggattaat | aatttattt | aacattttag | tgtttggtgg | cacattctaa | aatatagatt | 900 |
| aagaatactt | aaaatgcctg | ggatagttct | tgggactaac | aacatgatct | tctttgagtt | 960 |
| aaacctacct | aagtagattt | taggtgggtt | cctattaggt | cagattttta | gcttccctaa | 1020 |
| | | | | gttttaatta | | 1080 |
| acagatgtga | tgaggattta | atgaatcaaa | agacttaatt | tgtaattctt | taaaattatg | 1140 |
| agctagtata | tttgggggaa | actcaacctg | gtgctggtgc | tcttaacaat | tttgtaaata | 1200 |
| aagaaaataa | tttccttttc | tagaggtaca | tattaggcct | tttatgaaca | ctaaaacaat | 1260 |
| gaggaaatgt | tggtcatggg | gcaaagtatc | acttaaaatt | gaattcatcc | atttttaaaa | 1320 |
| aacacttcat | gaaagcattc | tggtgtgaat | tgccattttt | ttcttactgg | cttctcaatt | 1380 |
| ttcttccttc | tctgccccta | cctaaaacat | tctcctcgga | aattacatgg | tgctgaccac | 1440 |
| aaattttctg | gatgttttat | taaatattgt | acgtgtttac | agttgggaat | ttaaaataat | 1500 |
| acatacactg | gttgataaag | ggaagctgca | ggaccaaggt | gaagattgat | agtccaaatg | 1560 |
| cttttcttt | ttgagttgta | tatttttca | caccatctta | gatataatta | ggtagctgct | 1620 |
| gaaaggaaaa | gtgaatacag | aattgacggt | attattggag | atttttcctc | tgcgtagagc | 1680 |
| catccagatc | tctgtatcct | gttttgacta | agtcttaggt | gggttgggaa | gacagataat | 1740 |
| gaagtaggca | aagagaaaag | gacccaagat | agaggtttat | attcagaaat | ggtatatatc | 1800 |
| aatgacagca | tatcaaactt | cctatgggaa | aaagtctggt | gggtggtcag | ctgacagatt | 1860 |
| tcccatttag | tagtcataga | atacagaaat | agtttaggga | catgtattca | ttttgttatt | 1920 |
| ctgagcattg | ataggtcagt | atatctacct | aatctgtttg | gtaagtatag | gatatataaa | 1980 |
| ccattaccat | tgatctgtct | tatgccataa | tcttaaaaaa | aaattgaatg | ctcttgaatt | 2040 |
| cgtatattca | acaaagttat | ccttttataa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | 2100 |
| aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaa | | | 2138 |
| | | | | | | |

```
<210> 1030
 <211> 2489
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> SITE
 <222> (143)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (177)
 <223> n equals a,t,g, or c
 <220>
<221> SITE
 <222> (179)
 <223> n equals a,t,g, or c
<220>
<221> SITE
<222> (193)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2378)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2486)
<223> n equals a,t,g, or c
<400> 1030
ctcgacctgg gggctgcagc cgaaacggta ccccggactg ggtgatcctg gtgggcactg
                                                                        60
gcgcgctcgg gctgctgctg ctgtttctgc tgggaaaggg cccccgacga cctggccttg
                                                                       120
ctgaagaatc tccggagcga ggnaacagaa gaagaagaac cggaaagaaa ctgtcgngng
                                                                       180
aagcccaaac cgnatgggcg gactgttgaa gtggctgagg gtgaagctgt tcgaacacct
                                                                       240
caaagtgtaa cagcaaagca gccaccagag attgacaaga aaaatgaaaa gtcaaagaaa
                                                                       300
aataagaaga aatcaaatca gatgctaaag cagtgcaaaa cagttcacgc catgatggaa
                                                                       360
aggaagttga tgaaggagcc tgggaaacta aaattagtca cagagagaaa cgacagcagc
                                                                       420
gtaaacgtga taaggtgctg actgattctg gttcattgga ttcaactatc cctgggatag
                                                                       480
aaaataccat cacagttacc accgagcaac ttacaaccgc atcatttcct gttggttcca
                                                                       540
agaagaataa aggtgattct catctaaatg ttcaagttag caactttaaa tctggaaaag
                                                                       600
gagattctac acttcaggtt tcttcaggat tgaatgaaaa cctcactgtc aatggaggag
                                                                       660
gctggaatga aaagtctgta aaactctcct cacagatcag tgcaggtgag gagaagtgga
                                                                       720
actccgtttc acctgcttct gcaggaaaga ggaaaactga gccatctgcc tggagtcaag
                                                                       780
acactggaga tgctaataca aatggaaaag actggggaag gagttggagt gaccgttcaa
                                                                       840
tattttctgg cattgggtct actgctgagc cagtttctca gtctaccact tctgattatc
                                                                       900
agtgggatgt tagccgtaat caaccctata tcgatgatga atggtctggg ttaaatggtc
                                                                       960
tgtcttctgc tgatcccaac tctgattgga atgcaccagc agaagagtgg ggcaattggg
                                                                      1020
tagacgaaga aagagcttca cttctaaagt cccaggaacc aattcctgat gatcaaaagg
                                                                     1080
tctcagatga tgataaagaa aagggagagg gagctcttcc aactgggaaa tccaaaaaga
                                                                     1140
aaaaaaagaa aaagaagaag caaggtgaag ataactctac tgcacaggac acagaagaat
                                                                     1200
tagaaaaaga gattagagaa gaccttccag tgaatacctc taaaacccgt ccaaaacagg
                                                                     1260
aaaaagcttt ttccttgaag accataagca ctagtgatcc agccgaagta ctcgtcaaaa
                                                                     1320
atagccagcc tatcaagact cttccacctg ctacttctac cgagccatct gtaatcttat
                                                                     1380
caaaaagtga ttctgacaag agctcttccc aagtgccgcc aatactacaa gagacagata
                                                                     1440
aatccaagtc aaataccaag caaaatagtg tgcctccttc acagaccaag tctgaaacta
                                                                     1500
```

| gctgggaatc | tcccaaacaa | ataaaaaaga | agaaaaaag | : cagacgagaa | acgtgaaatt | 1560 |
|-------------------------|--------------|--------------------------|------------|--------------|------------|------------|
| ttttttcctg | , aattggacat | gtgtttgcaa | acacttgtct | t gaagattat | gctgtttatg | 1620 |
| caataatttg | , tgaacatgta | cagagtttta | tataaattta | a aaccaattt | taaaacaaaa | 1680 |
| ctgcggacac | : caccataaaa | atggaatcaa | aagaaagtta | a atttatgaaa | ttaagaggtc | 1740 |
| agcagaatat | actcagtgat | ggaagacact | tgggaaagt | c tttttaatac | aacaagaacg | 1800 |
| atcttaattt | aagaatatta | tcctggttta | acaacagtg | cctatttaca | acagattgtg | 1860 |
| ccctatctca | tctgcagccg | , aggaataaag | gattctgatt | agaaagaggg | ttgcctacag | 1920 |
| attagtaago | aattccttgg | atcttatgca | cagaacttgt | accatttgaa | tctgttttat | 1980 |
| gcttaaatca | aagtgctttg | r atcaaatgca | taacctgcca | tatctttaca | tatttgttgg | 2040 |
| tagcaatttg | tattaaagaa | atcacaagtg | caaataaaa | gtcatttato | atttgtttaa | 2100 |
| ctaaactgtc | atggtttagt | ttacaatttt | taaaaagtto | ttaaaatact | gaaaatgcag | 2160 |
| ttgacacttg | tgtatggctt | atgaagttat | ttttgatagt | cttacattac | ttgaattgtt | 2220 |
| caaagtacag | tatattttaa | attaagaaaa | gtgaactata | totatttott | ttatacattt | 2280 |
| aaggcttaga | ctcataaata | atgctattgt | ttatgattto | r aaaactttca | ggcaaaatcc | 2340 |
| aatttacatt | tttcccttcc | ctagcaatta | cttttttncc | agctycaact | cttcttagtt | 2400 |
| actaatactt | tgttgacttt | aaaaatggaa | tycattcaca | aacttttagg | gaaaaaggat | 2460 |
| gggggggaag | ggaaaaaccc | ctaggnggt | _ | | 5 | 2489 |
| <210> 1031 | | | | | | |
| <211> 1060 | | | | | | |
| <211> 1000 <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1031 | | | | | | |
| gcctgacctt | gtgatccacc | ggccttggcc | tgccaaagtg | ctgggattac | aggcgtgagc | 60 |
| actgcgccca | gccaaaagtg | ttaatcactg | agatgtctac | tgagaactcc | agattcataa | 120 |
| ccactctcag | aagcattaat | caaaccagag | gaacttagaa | ccttatcagt | gtaatcttga | 180 |
| cattttgcat | ctctaccctg | tggacaagta | ttttatttt | ytccctttga | gtatataatg | 240 |
| cattaatatt | tcaaaggact | ttgcaattaa | acacagaaga | agccatcttt | agactcaacc | 300 |
| ctaatactac | tttcagtagt | gcagactacc | ttccatttgg | catatgtttg | tatactgtat | 360 |
| acattttcat | agttgaaatc | atttatattc | tgattctttg | caccagacaa | atactttcta | 420 |
| caaattatct | tcatatcatt | ttagtaattt | gacatttcgt | tgtgttactc | atcttattcc | 480 |
| ttgaattata | gacaagtgga | ctgttacagt | gatgatagct | ttatggagta | tttgctttta | 540 |
| atggatatta | ccaccaagat | aaatatccag | aagtggaaat | acttcgacag | agagtatgaa | 600 |
| acggetetta | ccacacacta | ctgtattgtt | tttctgaagg | gctatatcat | tttaggattg | 660 |
| gatttatata | atarragaira | ttatgtaata | agtgtatcat | agaattatat | agatggaaag | 720 |
| cacctotaat | gcgraceyee | ctgtttacaa | atgaggraac | tggccaggca | tggtccctct | 780 |
| caectgtaat | ctagacaaca | tgggaggctg | aagcaggcag | atgccctgag | cccgggagtt | 840 |
| gcatggcagg | actacataca | tggtgaaacc | ccatctacca | aatatgcaaa | aattagctgg | 900 |
| agtgagggg | getacteggg | aggctgggag ttgcactcca | gaatgiitga | gcccgggagg | cggaggttgc | 960 |
| agegageage | aaacaaaaaa | aaaaaaaaaa | geetgggtat | cagagtgaga | ccctggttca | 1020 |
| agaaaacaaa | aaacaaaaa | aaaaaaaaa | gggeggeege | | | 1060 |
| <210> 1032 | | | | | | |
| <211> 3333 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1032 | | | | | | |
| atgaagatgg | gcaagaatat | ttggagattc | taactaaaca | aactaataaa | gatggagatg | 60 |
| atgaagattg | ggaagaagat | gatgctgaag | agactgctct | ggctggtgad | tccacaatca | 60 120 |
| ttgatgatga | agataaccct | gttgatgagt | atcagatatt | kaaaggtat | tttcasacta | 120 180 |
| ttcaaaatco | taatcctgtg | tggtatcagg | cactgactga | caatatteet | rescadated | |
| gaaaacaqtt | acaggacata | gcaactctgg | ctgatcaaag | aagaggagg | catcaatcaa | 240 300 |
| aaatgattga | gaagcataga | ggatacaaat | tcagtgctcc | agttgtgcc= | acttettte | 360 |
| attttggagg | cccagcacca | gggatgaatt | gagttatete | tttctttcct | actatatact | 420 |
| tgtagtgaag | agcttgtgtt | cctcctagta | gtggttccag | aactggttca | tattatetat | 480 |
| tctaaactaa | taatcaatag | atggacaaaa | gaaacaacaa | CCCCaddada | taggacctga | 540 |
| tcatgcaacc | tggcactgga | aaagaaatca | gcgggatttt | adadataaaa | aggaataga | 600 |
| ggtaccttag | agggagtatt | ttctttattt | tttgaagaaa | gtaagatect | gactctgaag | 660 |
| cttcaaagtg | acactgtgga | aatctgaaac | gaggggatgt | catgaagga | gcttttc++ | 720 |
| | - - | | | J | | , 20 |

| ttctgaggaa | a aaaataggca | tgggctacag | gactatttaa | aatgtctcat | ttacagtata | 780 |
|-------------|--------------|--------------|--------------|------------|------------|------|
| aaactcaaag | g gtagatgtaa | tttttacaco | : tatgagtatt | tgtccaattt | ctgtctcttc | 840 |
| ctcaccatto | g ggtatctatt | : ctttatatgt | : aaataagata | aggtcatctc | atagccttat | 900 |
| tcagtcttca | tcattttcat | cattgttcct | : atgtagatta | ttggacattt | attgtagcac | 960 |
| tacataacto | , attataaaaa | tctgtaaatg | , aattagcact | ttcatattga | aacaagcctg | 1020 |
| ctagcctato | , tataaaatag | r caaaatgttt | gctgtttata | aaaagatgta | atggggtggg | 1080 |
| gggcaggggt | aatttcaagt | : tattaattta | aaaatgaact | agcaatttt | tacctggtga | 1140 |
| ctttgtggtg | r cactcaccto | tgatagtgac | ttgaattcgg | tatgtaaaaa | ggggttagtg | 1200 |
| gtatttcatt | gctgctaaaa | atgacaacto | cctctgtgtc | ctgtttttct | taaagctgtc | 1260 |
| agtgtacaag | , tgggtatttg | aataccagac | cttactgtaa | aaaataaaaa | aggtggtatc | 1320 |
| tagagcatgt | : aaattggata | taaagttctg | r ctcttaaaga | gttgatctaa | gagtatggct | 1380 |
| aaacatctat | atatgcaatc | : tattaaaaga | acttaattcg | gctattatgt | cttgatttga | 1440 |
| ttgcagtttt | ttcctaatta | taacaaattt | ttcctcattg | gcctgttttt | aatcctgtgc | 1500 |
| ctagaaggag | tacaaaatgo | acactttaca | aaattgatat | ttaacactta | cccactcccc | 1560 |
| tttccccatc | tcttctaccg | ctcttgttga | tcgtggtatc | tgatcttgac | tagataggct | 1620 |
| gaaggcacat | ggttccctcc | aaaaaccact | attgatacca | ctacaaaaac | aagccagcaa | 1680 |
| aaagatactg | tagagaggtt | ggcttgcttc | cctctcttcc | taactgcatg | ttgaaaaata | 1740 |
| agccgttatt | gatcttaaac | atcggtcaga | tgagtcatac | attgggttat | tttttatata | 1800 |
| catgtataca | caaaatattt | caaattgaaa | gcaacatctt | aatggattca | aaactattac | 1860 |
| aagctgttgt | ctaaaacagg | tgagaaaaaa | atttataact | gtaaaaacaa | atgcacatat | 1920 |
| tgatatttaa | aatgcgtaat | taagaaaacc | cattgttgtt | gtgtttttct | tgtataccaa | 1980 |
| taattaagcc | actactgttg | gcactgtttg | gttttctrtt | ttaacactga | aggagtgaaa | 2040 |
| gtatttccta | tatttatgaa | tttactacta | aaatcttggc | aaaaaaagaa | aaaaattgtc | 2100 |
| taacgtgtgt | gggtgaaaac | tgttaatcaa | gtgtttctac | tcccccccga | aaatcccctg | 2160 |
| aaagttggac | accaactgta | taccctaggt | tgcttaaagg | gatttcacta | ttatataaag | 2220 |
| tcaataaaaa | tgaagtagtt | gtatatatgc | aacattgtgt | acagagggga | aataatgaat | 2280 |
| agtattaaag | aaacattctc | gtcttccttt | acctttaatc | ccctaatacc | tagtctactt | 2340 |
| tttaaatttt | cagacttcac | tgctttttga | attcataatt | ctaattttca | cattattatt | 2400 |
| aatggaaaat | catatctaat | aaaggtttta | gttattccca | tgcacagtat | gaaaattctc | 2460 |
| atttgctgag | gttttgtttc | aagaaaatgt | attggcatgt | ctttgagaac | atgttttatt | 2520 |
| gtctcctgtg | tcatataatc | caaactaatc | tccgtttaca | gactttaact | tgaaattaga | 2580 |
| ccttataatt | aaactattta | aatagtgktc | aaatgatagt | ttctaatgca | tcaaatatat | 2640 |
| acctcagttt | tcatgatttc | ctttaacatt | ataatttggt | atagatcaag | aatcttaaca | 2700 |
| tgtatcagtt | tctagatgag | gctgcaggat | ttttggaaaa | ctttttgaat | gtatttacaa | 2760 |
| tattctctgt | aattagctac | atagggactt | gkctttttt | ctttttacat | acagcttttc | 2820 |
| ctacagtttt | attaccctgt | aattttttt | tagttgtaga | agttaattct | gattttgtgt | 2880 |
| ggatttcagt | atttgtcttt | gttaatggca | catattagca | taaatcactt | ttgtaaatgt | 2940 |
| aagctttctt | tttttttctt | gaaaaagcct | ttctatttat | cagtattaaa | taaaggaagt | 3000 |
| taatctgttt | ctctgcaggt | aataaaatag | tgacacactg | tattaagata | gtgactgcta | 3060 |
| tactcaactc | tggaagagac | tagagtatag | agcatgagtg | gcaaaaccac | agcccttggg | 3120 |
| ccatatgctg | ctattcagtc | ccagatgtag | cccctgaagc | aagcataaag | aaaaatgaat | 3180 |
| taaaaattaa | attaatatgg | aaagttaaaa | aatggattac | attagtatga | ctaaaccatg | 3240 |
| tctttggcaa | agatctaaca | caatgtctta | agtataatag | gtagtctctg | tttgtaaaat | 3300 |
| aaatgactta | aatttaaaac | atcaaaaaaa | aaa | | | 3333 |
| | | | | | | |
| <210> 1033 | | | | | | |
| <211> 2020 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| -400- 1000 | | | | | | |
| <400> 1033 | | | | | | |
| geggaegegt | gggttggaga | agaacagtac | ttcacttaaa | gagaaagagc | acaataaaga | 60 |
| casastaca | ayıyıyayca | aagaagtaga | tgacaaggat | gcaccaagga | ctgaggaaaa | 120 |
| aggagentate | cacaatggga | actgtcagct | gaatgaagaa | aacctctcta | ccaaaacaga | 180 |
| ttaattatat | gaccyacaag | topacetetg | cactcaatgc | tggaatcaaa | tccaaagctt | 240 |
| taacacattt | tagagete | caaacaggaa | agaaatctag | ttgagcatga | agataggatc | 300 |
| aadayettt | atantana | agatgacttt | gtggccatct | tgttattgag | taagaaaata | 360 |
| tttccstc~ | accatgaaaa | caacagatgt | tacccaaact | catcttctaa | aatctgtgca | 420 |
| aaataaatta | gyctyacaca | cligicatgt | ggtctgttag | tgtttgccaa | gaaccattgc | 480 |
| tagaggetet | tttaaaaag | acceaagttt | gtactatccc | taaagactgg | agataagcat | 540 |
| cygayyctct | ıııaadddat | yctagttact | gaattttgta | ttgttttact | tttttttta | 600 |

```
tttcaatata tacagtttga tgatgtgctt gaaattggtg caaatatata cacaccttg
                                                                     660
 taagtgcaaa gtatgtaaga agttttaaca tttacttcac aggacttgtg attgtgttaa
                                                                     720
 attctcacta ttgtgttttc ttttgctcac tgtttaggac aatttttctt taaaatagtt
                                                                     780
 ttgcagatta aaattgctta aataagtgga ttaaaaaaact gacaatgcat gctactgttc
                                                                     840
 tctttcaaaa ggaagagcaa ccgtgttgaa tactaataat gatgaattag tattcagtgt
                                                                     900
 ttagaatcat tgggactacc cacaaagtga gcatttcttt ttaaattttc ttgacatttc
                                                                     960
caagcttatt atgaataata ttgcagtgtg tcttgtcagc tgtaggtggc aaaggtgccc
                                                                    1020
 ttataaaaaa ggaaactggc ttttcaaaat gggctatggg agcacaagct gaagctttag
                                                                    1080
tgccttctac aatgtggtat actgttttct agaattttat atgtgctagt cattctcaat
                                                                    1140
tcatatggaa tctagatgga tatttcatgc atacccatag agaagtgtgt aagtgatatg
                                                                    1200
tcagaagagc ttcttactga tttcacctaa aatgagaagg aagtcctgtt ttcaagaatg
                                                                    1260
acattagagt catgcagctt tgggaccatc agttttatac tgtgataatt gaaaatgaaa
                                                                    1320
catgitictta titticcitaa attgaagaaa accctttagt tgictacatt ggatggcctt
                                                                    1380
attacctctc aatcatcttt tcataaatga tgtgcagaaa ttgtacttaa ggacttagga
                                                                    1440
gtatatggga ggttattggt tttatgttta aggatacgtt tacttgagtt taagatacag
                                                                    1500
gtcatccatc attcttaggc tcacttttta cagaaagtat gcaaatagta aagtgacagc
                                                                    1560
actgctaatg tttttcccca gtactataac ttgtggtttc tgaactcatt attgttgtat
                                                                    1620
ttccaaaaaa gtaatacctt ttaattagtg tattaaaagt taagtataat tattttaatg
                                                                    1680
caatctaata caatcagatt actcagttgc cttacctcat gggaagagtt actttttag
                                                                    1740
atctaaaaag ctgaatagca tgttagttac ttggtttcaa cttgagtttt cttttaatgt
                                                                    1800
taataagatt gaaactttag tatttagtgg ggaatggaaa gagttgccct tgttgcaagt
                                                                    1860
aatgaagcct gatttgatta tgaagctgct taatcactct tcatgtgttc agaattactg
                                                                    1920
1980
actatgtaaa aaaaaaaaa aaaaaaaaa aagggcggcc
                                                                    2020
<210> 1034
<211> 747
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (9)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (15)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (20)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (63)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (87)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (105)
<223> n equals a,t,g, or c
<400> 1034
```

```
aaaatggtng gtaancaaan ttccggcccc cattgaccgc aaattgggcc ggtaaggcgt
                                                                        60
 gtncggtgga aggtcctata taagcanaag ctcgtttagt gaacngtcag ttcgcctgaa
                                                                       120
 gacgccatcc acgctgtttt gacctccata gaagccccgg gaccgatcca gcctccggac
                                                                       180
 tctagctagg ccgcgggacg gatacaattt cacacaggaa acagctatga ccactaggct
                                                                       240
 tttgcaaaaa gctatttagg tgacactata gaaggtacgc ctgcaggtac cggtccggaa
                                                                       300
 ttcccgggtc gacccacgcg tccggactag ttctagatcg cgagcggccg ccctttttga
                                                                       360
 atgctttcta atggttttcc tccttaagtg tcaagttaac aattttaacc ctatccagca
                                                                       420
 atactccctt ttccctctga aatccagtgg cacatgttct atttctctct tttgtatgcg
                                                                       480
 tggtttatat ttttgtcttg gtgtggttat ttgcacacat gccatacttc taaaacccag
                                                                       540
 ctgtttggtg cttttcttag agtccttctt tttccctgtg ctgatgtatg caggattcgg
                                                                       600
 gaactcttca tgaatagcac acactttggt gagaaattta gacttacctg aagattctgt
                                                                       660
 ggaacaggtg gagaggattt tcttttcttt ttttcacttt taataacttt cactttagga
                                                                       720
 tgattttaaa agtgaaaaaa aaaaaaa
                                                                       747
<210> 1035
 <211> 735
<212> DNA
 <213> Homo sapiens
<400> 1035
ccacgcgtcc gctcacggct tcaatgatgc atttctcgaa ggtcttggcc acactgtcct
                                                                        60
ctaagccttt ggtgtcccag caactattgc agtaggcagt gatctgggag aggggttcct
                                                                       120
cctgcaaaaa tcaaaggggg gtggtttcag agctttcgga tgcagcgctc cagtgctcta
                                                                       180
tgggatgaaa attctttcat catttttact ttcctgctgt tttactgttt cccccaattt
                                                                       240
taagcttctc ctggcccacg caaagcatgt cctccctgcc ccccaccagt agaccaaagg
                                                                       300
ctaaaaattta aaagagtctc ttttcccact ctgcagaaaa agcacctggc ttgcaaaaac
                                                                       360
aggtaagtta tgagacatag gtcatttttc cttgtttctg acttttccct ttaaagatcc
                                                                       420
atttaacagt tacatatagg ccgggcgcgg tggctcacgc ctgtaatccc agcactttgg
                                                                       480
gaggccgagg cgggtggatc acgaggtcag gagatcgaga ccatcctggc taacacggtg
                                                                       540
aaaccccgtc tctacaaaaa atacaaaaat atagctgggc gcggtggcgg gcgcctgtag
                                                                       600
tcccagctac tcgggaggct gaggcaggag aatggcgtga acccgggagg cggagtttgc
                                                                       660
agtgagccga gatcccgcca ctgcactcca gcctgggcga tagagcgaga ccccgtctca
                                                                       720
aaaaaaaaa aaaaa
                                                                       735
<210> 1036
<211> 1723
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1675)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1680)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1682)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1684)
<223> n equals a,t,g, or c
<220>
<221> SITE
```

```
<222> (1694)
 <223> n equals a,t,q, or c
 <220>
 <221> SITE
 <222> (1696)
 <223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1709)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1716)
<223> n equals a,t,g, or c
<400> 1036
ggcacagctg agaaggagat ggtaagttca agaagactga ttgcacctgg gacccaggcc
                                                                    60
ctttctttgg gatccagtcc cagccttcat ccatgtgatt aagatccagg ccgctgaagt
                                                                   120
tccccaggaa atgatcttcc acttgagcaa ccttttactt gatacgattt gcacctttct
                                                                   180
gttttcctgc agtcagggtg gtggcctgca gggacctgag ctttgctacc caaccagatt
                                                                   240
cctcatagag attcctaatc actagtttct tgtattcata aactcagaga tacagagggc
                                                                   300
ttggtttgaa gttggggtga gatgaaacct ttgctctgag ccaaagctct ggggccttgc
                                                                   360
attccctgca ttgggttgat gactgtcagc atcactgccg caggccatgc ttgactaagg
                                                                   420
tacctggttt tagccacage cacctccttg tatgttacct ttcagctctg gccaagagtg
                                                                   480
ggacagggtt ttaaccacaa ataggagcag catgcaattc ctagtgactt gctgcacagt
                                                                   540
attgtatcat aattacagga agtttttatt tttaaaaactg gatctggggt atattcattt
                                                                   600
gccccatcac ctctgtctaa aggcccaagt cctagggctg ccatggtcac aagcacactg
                                                                   660
atgctcctta agattgttta tctggagccc acatagtgtg gaacaaaaag tcacctagaa
                                                                   720
agcatcettg gtcatcattg teteetteec acetggeeca gagatgetta aatccaagtt
                                                                   780
gtttctccag ctgtcacctc ccccaggaga tcaggattcc actgacgtcc tgggcagcca
                                                                   840
gtgaatttaa ttttccatga gaaacaacag agttaacctg tggcattagg agacctactt
                                                                   900
catgtggacc ctttttttcc ttcagtttaa cttttctgga gcagtgtgct gcgtagttcg
                                                                   960
gcctgagttt gtgcagcttg ttaagacaac tcttgtgtac gctatgttga agctcaacaa
                                                                  1020
aaaagtcatg ggaccacttc tagaaatctt tcagctgtca ggcctgtcag tctcatgaca
                                                                  1080
1140
tttcccctgg ccttatccta tagaggcatt tgtaatatgg agaaaataat ttttcatttt
                                                                  1200
tgctcattta attctataaa ttctctttat aaatgaattt tgtgttcttt agttctcctt
                                                                  1260
aaaagaactt ttgaattata aaaataaaat ctttacctgt cgaattgttg ctgcagatga
                                                                  1320
ttgttgtgga aaatctggat cattgacctc tgtgctttca ttcctagaga tgttttatag
                                                                  1380
ttacatgagc aaaagctgtt gccccaaagt gatggccctg gaggcggggc tgaggaacag
                                                                  1440
ggaaatgccg ctgtgaagtc ttaaagcact tctgcttaaa ctccatgtgt gaggagtgtg
                                                                  1500
cctccctgtg ccctctcagc tctgaggctg gccgtctttc ggggtgttcc ttttggcaaa
                                                                  1560
tatacactgt aatcttgagt ctaaatttat atgttgaaat gctacctttt ttaaaataag
                                                                  1620
1680
cntncccaac acgncnaaaa cgtacgccna cacagnggga acc
                                                                  1723
<210> 1037
<211> 1054
<212> DNA
<213> Homo sapiens
<400> 1037
ggaggaattc aactgtactt cactgaaggg ctgtcagctg gcttattagg ataaattctg
                                                                    60
ggattttatg ctgggcatag tgatttcgtg cttattttac tgctggacca aatgggaagc
                                                                   120
aaaggaagtg tgtcaaagaa ggtggagggt tagaaggtac catctgagta aaattagctg
                                                                   180
aatttccctg acttccatat tcttccatta tttctcttat cccctgccag tcactttagc
                                                                   240
ctgaattagc tgtgaggcaa actattttgc tatttctatg tgtggatctt ccagtgtgac
                                                                   300
tttatgcagt cattgaaatt gtcttaagca caaatgaaac ctcatggaaa tgttaattac
                                                                   360
```

| cctctgagac taagttttat tggtcagaga cccaagaggg ccccactccc tgttttctct taaacattgc | attaaccttc actactcctt aatccagatc aggcctcctg gaggtgagtg cacccaaact cttctgtgtt ctttgcttgg ctccacctcc | agtaggttcc aacacagaga gaaaggttag agatgagcca tttcacactg tcagggaaca tgaagaaact | aaccaggaag agggtactgc gcctgctgaa ccttcctata gggagaagtt gcggatgaaa gtgtgagctg | gaggcaagtt tctggtattg tcttcaagaa ggtctctcct tctgacatga gagcacccct tcctgacctg | gaatagagtc agggtgggag caagcagcag ccttccatgc acatctaact cattcgaacc gacgatgacg | 420 480 540 600 660 720 780 840 900 |
|--|--|--|--|--|--|---|
| gcgctggcaa ccattaagct | gtgataggaa ttataaaatc cccttgtata | cattctggcc atgtgggctc | agaggttaaa tgaaattgtt | gagcaggctg | acatggctgg | 960 1020 1054 |
| <211> 1401 <212> DNA <213> Homo | sapiens | | | | | |
| | ctactatgct | | _ | _ | | 60 120 |
| | caaaagacat tccaaagatc | | | | | 180 |
| - | agtatactcg | | | - | | 240 |
| | aaatgaaagc | | | | | 300 |
| | atctgtatac | | | | | 360 |
| | cctttttatt | | | | | 420 |
| | tatatacatt | _ | _ | | - | 480 540 |
| | gatttactaa gcacctccag | | | | | 600 |
| | gttaatattt | | | | | 660 |
| | aatggaaaat | | | | | 720 |
| | ggaaaaccaa | | - | - | | 780 |
| | aaacttcgct | | | | | 840 |
| | tcacaaatca | | _ | | | 900 |
| | tatacaaagt | | | | | 960 |
| | aaagccatgt | _ | _ | | | 1020 |
| | ctgcccttca | | _ | | - | 1080 |
| | ctcttgatgt tcacttaaca | | | | | 1140 1200 |
| | ctttttgtag | _ | | | | 1260 |
| | ttagttgact | | | | | 1320 |
| | taaaaaatag | _ | _ | - | | 1380 |
| tgtaaaaaaa | aaaaaaaaa | | | | | 1401 |
| <210> 1039 <211> 1447 | | | | | | |
| <211> 1447 <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1039 | | | | , | | |
| | tttttttta | | | _ | | 60 |
| | agcaggcttt | | _ | _ | | 120 |
| | acttcctaca gtcacccatt | | | _ | | 180 240 |
| | gtcacttaaa | | | | | 300 |
| | actatttgct | | | | | 360 |
| - | agcgagacat | | | | | 420 |
| gaactatggt | gtcatggaga | agccctcact | ttacaattga | tcctgtctaa | tcagggtcag | 480 |
| | gagttgctca | | | | | 540 |
| _ | tataaattat | | _ | _ | | 600 |
| cacactcccc | ccaggtttcc | tgttaacctc | tgctttgatt | tttagtggca | agctttacgt | 660 |

| gcgatccacc | cagccattgt | tctggctgca | gttgtaacgt | ttgcagttgc | atacattaca | 720 |
|------------|--------------|---------------------------|------------|------------|------------|--------------|
| ttgtccagtg | tctgactgtg | tcttcatgag | aacgaatata | ctgagatttt | ctttctttag | 780 |
| tcattggaaa | gtatagttgc | tacttattgc | catccttccc | attcatggtt | tcctatttac | 840 |
| | | caaaacaaaa | | | | 900 |
| atccttcccc | caggcactta | aatcttatac | tgtgatttgt | aactagtact | gcttatttaa | 960 |
| ggaactctta | ggaattcagt | gatttttgtg | tgtttcattc | cctcagctaa | ttagagcctg | 1020 |
| | | tagcgagaga | | | | 1080 |
| | | aggatactga | | - | _ | 1140 |
| | | gcccatttaa | | | | 1200 |
| | | ttctgttgct | | | | 1260 |
| | | aaagatatgt | | | | 1320 |
| | - | tttatttta | | - | | 1380 |
| | | taattttta | - | | | 1440 |
| agatgaa | ~ | | | J | 3 3 | 1447 |
| 5 5 | | | | | | |
| <210> 1040 | | | | | | |
| <211> 1821 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1040 | | | | | | |
| | ааааадсааа | attgaatatt | ttgtcacaat | ttcctatttt | gtcatactga | 60 |
| | _ | tgtatagaaa | _ | • | | 120 |
| | | aacctgcatt | _ | | | 180 |
| | | agacttcttc | | | | 240 |
| | | atttcctcta | | | | 300 |
| | | tcatgttgag | | | | 360 |
| | | tccggactat | | | | 420 |
| | | gtactaatca | | | | 480 |
| | | ttctttcagt | | | | 540 |
| | | ttcatttgtc | | | | 600 |
| | | _ | | | - | 660 |
| | | tatactgcac taaaaaaaagg | | | | 720 |
| | _ | ctaggggact | | | _ | 780 |
| | - | | _ | - | | |
| | - | ggcagagcta | | - | | 840 900 |
| | | aacatgagtm aactggcttt | | | | 960 |
| | | | | | | 1020 |
| | | acaactagaa gataattttg | | - | | 1020 |
| | _ | - | | | • | |
| | | ttggttttag acctaagtaa | | | | 1140 1200 |
| | | | | | _ | 1260 |
| | | ggtttcttgt | | | | 1320 |
| | | cttcagcttg gtttctgcct | | | | |
| | | | | | | 1380 1440 |
| | | taggatatct tctgaactga | | | _ | 1500 |
| | | gactaaatta | | | | 1560 |
| | | | | | | |
| | | ttttcaatca aaatcagggg | | | | 1620 |
| | | | | | | 1680 1740 |
| | | gcaggtcata aaatgagtat | | | | |
| | | | ggetgtatte | Caaaaaaacc | gtatttacaa | 1800 |
| aaaaaaaaa | aaaaaaaaa | a | | | | 1821 |
| Z210× 1041 | | | | | | |
| <210> 1041 | | | | | | |
| <211> 3168 | | | | | | |
| <212> DNA | anniere | | | | | |
| <213> Homo | sapiens | | | | | |
| ~100× 1011 | | | | | | |
| <400> 1041 | +~+-+ | ++~aa+ | | | | |
| | _ | ttgaatgcat | | _ | | 60 |
| cayaayccct | acceagacet | aactgggaac | rggeretgta | Lateateate | ccaggaataa | 120 |
| | | | | | | |

```
tgagtgcact gtttcttttg gtcattggaa cagcctattt ggaagctcaa ggaatatggg
                                                                       180
agccatttcg aaggcggcta tcctttgagg cctcgaaccc gcccttcgat gtgggaaggc
                                                                       240
catttgatct caggagaatc gttggtattt catctgaagg aaacttgaac acactcagct
                                                                       300
gtgaccccgg tcacagtagg gggttctgtg gagcaggcgg ttcatcatcc cgacccagtg
                                                                       360
ccgggagtca taagcagtgt ggcccatcgg tccacccaca cagcagtcac agcaatagaa
                                                                       420
actcagctga cgtggaaaac gtcagagcca aaaacagttc aagtacctct agtaggactt
                                                                       480
ctgctcaagc agcttcttca cagtctgcta acaaaacaag cccccttgtc ttagattcga
                                                                      540
acacagtgac tcaaggtcat acagcgggca gaaagtccaa aggggcaaag cagagccagc
                                                                       600
acggcagcca gcaccatgcc cacagcccgc tggagcagca ccctcagcct cctctgccac
                                                                       660
egecagtgee teagececag gageegeage etgaaagget gteteeegee eeetegeae
                                                                      720
accettecea eccagaaegt gecageageg egaggeaeag tteegaggae teggaeatea
                                                                      780
ccagtctcat agaagccatg gacaaagact tcgaccacca tgactcccca gccctagaag
                                                                      840
tgtttacaga gcagcctcca tcgccattgc caaaaagcaa agggaaagga aaacctcttc
                                                                      900
agcgcaaggt gaaaccacct aagaagcaag aggaaaagga gaagaaggga aagggaaagc
                                                                      960
cacaggaaga tgagctgaag gactctttgg ctgatgatga tagctcctcc accaccacag
                                                                     1020
agacctccaa ccctgacaca gaaccgctcc tcaaggagga tacagaaaag caaaagggaa
                                                                     1080
aacaagccat gcctgaaaaa catgaaagtg aaatgtctca agtgaagcaa aaaagcaaaa
                                                                     1140
aactcttaaa tattaagaaa gaaatcccaa cagatgtgaa acccagttca ttagaactac
                                                                     1200
catatactcc ccctttggaa agtaagcaac gtagaaatct cccaagcaag attcctcttc
                                                                     1260
caactgcaat gacaagtgga tccaaatcac gaaatgccca gaaaacaaaa ggtacaagta
                                                                     1320
agttagtgga taacagacca cctgccctag caaaattcct cccgaatagt caagaattag
                                                                     1380
gcaacaccag tagctcagag ggtgaaaaag actctcctcc accggagtgg gattccgttc
                                                                     1440
cagttcacaa acctggcagc tctactgata gtctttataa actttctctg caaacctca
                                                                     1500
acgcagacat tttcttaaaa caacgccaga cctcaccgac acctgcttcc ccgtctcccc
                                                                     1560
cagctgcccc ctgccccttt gtggcccggg gcagctacag cagcatcgtc aacagcagct
                                                                     1620
ccagcagtga ccctaaaata aaacagccaa atggaagcaa acacaagttg acaaaggcag
                                                                     1680
cctcgctccc gggcaagaac ggcaacccca cttttgctgc agtcacggct ggctacgaca
                                                                     1740
agagcccagg tgggaatggc tttgctaaag tttcttcaaa caaaacaggt ttctccagca
                                                                     1800
gccttggcat ttcacacgct cctgttgaca gcgatggctc agacagctcg ggtttgtgga
                                                                     1860
gtcccgtcag caacccaagc agccctgact tcactcccct caattcgttc tccgcctttq
                                                                     1920
gaaactcttt taatctaact ggtgaagttt tcagcaaact cggattatct cgatcgtgca
                                                                     1980
atcaggcctc acagaggagc tggaacgagt ttaatagtgg cccttcatac ctttgggagt
                                                                     2040
egecagegae agateceagt cetteetgge cagecagtte eggeteeeeg acceacaca
                                                                     2100
ccacatcggt cctcggtaac accagcggcc tgtggtccac cactccattc agcagctcca
                                                                     2160
tttggtccag caaccttagc agcgcccttc ccttcaccac tccagcaaac acgctggcaa
                                                                     2220
gcatcggcct catgggcaca gaaaactccc ctgctcctca cgctccctcc acctccagtc
                                                                     2280
cagctgacga cttgggacag acctacaacc cgtggcggat atggagcccc acgattggaa
                                                                     2340
gaagaagete ggaccettgg tetaattege aettteetea egagaattaa attaageaaa
                                                                     2400
aaacaaacaa acatagtggg ccctcgtcta gatcatgatg tgccagtttc tgagacatct
                                                                     2460
ttttaagget ettaetgeag etceceteee cacceteete ttetttgeaa aacagaecea
                                                                     2520
agcagggcag gctcagacca ctcgcttctt tcagatcttt cttgcaatta tqataacatq
                                                                     2580
agatttgctg ttgtgctttt agagaaaagt ctggactcag ccacaaactc taataagacc
                                                                     2640
tgtacatctg agaacctttc ccgttactgc gttttcacca cctgtcttcc ccatgcttta
                                                                     2700
tttatctgta tgaacacaga tttgacatta cagctaagga aataatttga gttgattcag
                                                                     2760
aaatcctggc atgtgacaat tttgttaaat taccaagttt ggtttttaat aatttctcaa
                                                                     2820
tattatgcgc caagatctaa ttttaaaaact gtatgaggac tttgtgctga aaatagagta
                                                                     2880
tttttttaaa gtaaggctgt cttggtttaa aagcagatta cagaaatgta agtcaactta
                                                                     2940
agaacagtga atgaatgtaa aaacattcag tcgagaccat atgcattttc tgtgctgttt
                                                                     3000
gtacttgagg tatgtaacat ttgtatacct gaacttattt taaagatgaa ctgaaatgca
                                                                     3060
catagccaag tettgagata caagattgaa tgtgtattte ttaaaaatac aaetttgtgt
                                                                     3120
tgtactttga aataaatgat gcttttttca aaaaaaaaa aaaaaaaa
                                                                     3168
<210> 1042
<211> 1302
<212> DNA
<213> Homo sapiens
<400> 1042
ggcacgaggt ctgtttgatt tttaaaagga aaggatttgt ttcagattat acaagaataa
                                                                       60
aagtattata gacccaaggg acttcttatg aggtcaaatt cagatattta tatgaatatg
                                                                      120
aaataccatg gtccctagta gtcagttgaa gtggcaatgt ctaaacagaa atgaacaaaa
                                                                      180
```

| ctaatgctag | caggttaaaa | tcaatcaaaa | tgtttaaaaa | ttgattctgt | cctcagcatg | 240 |
|------------|------------|--------------------------|------------|------------|------------|-------------|
| ttacttcctc | agctctgata | atttactggt | cttgagtatt | ttgagaattt | gatgttgaac | 300 |
| - | | cttgtttaga | | | ~ | 360 |
| attcttgtca | cacatcaaga | agaaaacact | agagtgctgc | tggaattcca | aatctgaaga | 420 |
| _ | - | tgttattaaa | | | ~ ~ | 480 |
| | | atgtcacatg | | | | 540 |
| | | acctaagcct | | | | 600 |
| | | tgggtatttt | | | | 660 |
| | | aaaactactg | | | | 720 |
| | | ctttggccac | | | | 780 |
| | | aaaattatat | | | | 840 |
| | - | caggcaacca | | | | 900 |
| | | ctacttagtt | | | | 960 1020 |
| | | ttgtataggc ccacacagtg | | | | 1020 |
| | | tgttaaagga | | | | 1140 |
| | | gtaaacctta | | | | 1200 |
| | | tcgagcccac | | | | 1260 |
| | | aaaaaaaaaa | _ | | ccccataac | 1302 |
| aucauacece | caccgageaa | aaaaaaaaaa | aaaaaaaaa | aa | | 1302 |
| <210> 1043 | | | | | | |
| <211> 1158 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | _ | | | | | |
| <400> 1043 | | | | | | |
| ggcagagatg | ggtcagatac | atgcagctgt | ttctgttata | tataactctg | gagccgagaa | 60 |
| aaattagttg | atttacatgg | agatcaaatc | cctgtccttg | gactcagtaa | tatgttatgg | 120 |
| | | agaacttctt | | | | 180 |
| agaagagctc | tgctggtcga | aacaaaaata | atttccattg | agaaaattta | agcataaaag | 240 |
| | | tatcagaata | | | | 300 |
| gttttgtttt | atcagtatga | tcgccctgga | gcatccccta | agaggaatca | tgatggagaa | 360 |
| | | gtcaggagtc | | | | 420 |
| | | ttatgataga | | | | 480 |
| | | tagtaacagt | | | | 540 |
| | | ttttgttttc | | | | 600 |
| | | tcccagttga | | _ | - | 660 |
| | | ctcacacctg | | | | 720 |
| | | gttcaagacc | | | | 780 |
| | | gctgggcagt ttgcttgaat | | | | 840 900 |
| | | | | | | |
| | | gtgtcactag | | | | 960 1020 |
| | | aaagagttga | | | | 1020 |
| | | atttcaagaa | | | | 1140 |
| aaaaaaaaaa | | | | ~5050~~55~ | aoaoogeaaa | 1158 |
| | | | | | | |
| <210> 1044 | | | | | | |
| <211> 2046 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1044 | | | | | | |
| | | aggcgctgtt | | | | 60 |
| | | tcgcgagatc | | | | 120 |
| | | ctattcagct | | | | 180 |
| | | gcggaggcca | | | | 240 |
| | | tattaggtcg | | | | 300 |
| | | gctaaccttt | | | | 360 |
| | | ctgaaagcgg | | | | 420 |
| agaggctggg | aacacggccc | acctagcagg | aagtcccacc | tccttgagct | ccgccaccct | 480 |
| | | | | | | |

```
540
tcccgaagtt tttctgtcac ctgtgttagg ctccgtcccc tttccgcgtt ttatccccgt
accagaaaag gatacattta gtgcctccca cccagctcca ctaaacgggt tggatatctc
                                                                   600
attetttgag ttggtgttee tteeceggeg eececatgta getgggaagt gggaeetggg
                                                                   660
ggtggttgga cccctgggat cctaaaggag gggcagggag ggcgcagaac tccgcttctg
                                                                   720
ctccttgcta ccaggacgcg cggcctcctc agcctctttc ctcccgctgc catgcaccct
                                                                   780
                                                                   840
900
gggctcattc gagcgacctc ggaccacaat gccagcatgg actttgcaga ccttccagct
ctgtttgggg ctaccttgag ccaggagggc ctccaggggt tccttgtgga ggctcaccca
                                                                   960
gacaatgcct gcagccccat tgccccacca cccccagccc cggtcaatgg gtcagtcttt
                                                                  1020
                                                                  1080
attgcgctgc ttcgaagatt cgactgcaac tttgacctca aagtcctaaa tgcccagaag
ctggatatgg tgccgctgta gtacacaatg tgaattccaa tgaacttctg aacatggtgt
                                                                  1140
ggaatagtga ggaaatccag cagcagatct ggatcccgtc tgtatttatt ggggagagaa
                                                                  1200
gctccgagta cctgcgtgcc ctctttgtct acgagaaggg ggctcgggtg cttctggttc
                                                                  1260
                                                                  1320
cagacaatac cttccccttg ggctattacc tcatcccttt cacagggatt gtgggactgc
                                                                  1380
tggttttggc catgggagca gtaatgatag ctcgttgtat ccagcaccgg aaacggctcc
agcggaatcg acttaccaaa gagcaactga aacagattcc tacacatgac tatcagaagg
                                                                  1440
                                                                  1500
gagaccagta tgatgtctgt gccatttgcc tggatgaata tgaggatggg gacaagctgc
                                                                  1560
gggtactccc ctgtgctcat gcctaccaca gccgctgcgt ggacccctgg ctcactcaga
                                                                  1620
cccggaagac ctgccccatt tgcaagcagc ctgttcatcg gggtcctggg gacgaagacc
aagaggaaga aactcaaggg caagaggagg gtgatgaagg ggagccaagg gaccaccctg
                                                                  1680
cctcagaaag gacccactt ttgggttcta gcccactct tcccacctcc tttggttcct
                                                                  1740
tagececage teceettgtt ttteetggge etteaacaga teceecactg teceeteeet
                                                                  1800
cttcccctgt tatcctggtc taataacccc ccacacatac acctctggtg acctatttgc
                                                                  1860
acagaccgtc gtcttccctc cagtcttctg agggataggg gacattccat cccaagcttc
                                                                  1920
tecettacee acacetatee ttttgagggg etttggggtg gagetgggge aageagaggg
                                                                  1980
2040
aaaaaa
                                                                  2046
<210> 1045
<211> 1590
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (981)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1083)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1124)
<223> n equals a,t,g, or c
<400> 1045
nattteetet eeteteeage teegacattg tgetgtaaac acaggeetet geettgaaca
                                                                   60
catgtttgcc agatgctccc tcttactcat ttcttttctc ttgtttactg ccaggttttc
                                                                   120
tcaagtgcgt ggtcaccagc catggcctcc atttccttag tctctaccct gtatcctctg
                                                                  180
cccgctgggt cctactgctc aacctctccc tggctgctaa atccaatagt cttttctctg
                                                                  240
tccttacctg cagggcctca tgggactatt tggcaatact gaccacagga ttgtctcata
                                                                  300
actcgttttt gctttggctt ccatgacact ctggcaagct tagttcttcc tccttttctg
                                                                  360
gcttccatac cagctgttaa atgtgagtgt tttggtactt ggccttctct tctctctgta
                                                                   420
```

```
tgttcccctg ggctctgcta taaacttcag tgcatctggt tctcagtttt ttatacttgt
                                                                      480
tatttgtctt ttgacgaaaa gcagatcttt ggagtttgac tcaagcctgc taggtccacc
                                                                      540
tgagcagcag aacagctctg gctgggtaac ccttgaattt tcatgtgttt cttgatgtgt
                                                                      600
ttcaaagaag agctgggatg ttgatccttc ttatcgctgc acccatttat ctcagggcat
                                                                      660
gttgagtgac tcagctctct tgcagtgtaa acccaagagg agctcatggg tcattcctgg
                                                                      720
gattcagctg cttctacagt ccgtgtcact cattagaggc aagctatgtt ttgcctagac
                                                                      780
ttttgcttgt actttggctt gggaaaccct ctgtggcatc ctgtgggggt aggtctaatc
                                                                      840
ttttcgactg tgtggaaggt caattcaaaa gtgagacgta acttcttaga tcacgtacca
                                                                      900
tattttcctc ttgtgtgtac agctgctctg gggctcagct acagttacct catgttgaat
                                                                      960
tgcctgcttt tgagttgctg nattctggtg taggtgtaat ctggttattt gaactttact
                                                                     1020
gatattacsa agagctttgg ggattttttt ttaaagaatt gagatgggtt attctgaacc
                                                                     1080
atnoatattt aatsooogat tottgktaga attattaaca gtanttottg gaagagagtt
                                                                     1140
ttctttggag gataaarctt tttttttt tttgaggcag agtcttgctc tgttgcccag
                                                                     1200
gctggagtgc aatggcgtga tcttggctca ctgcaacctc catgtcccgg gatcaggcga
                                                                     1260
ttcttgtgcc tgtagtccca gctactcggg aggctgaggc aggagaatag catgaacccg
                                                                     1320
ggaggtggag cttgcattga gccgagatca tgccactgca ctccagcctg ggtgacggag
                                                                     1380
caagactccg tccccaaaaa gaaaaaaaaa aaagctatgt aaaacaatga cagccacgac
                                                                     1440
gacagcagca ccagcagcat tcagtcgatt gtgtatttca tttgggcaat tcaattggca
                                                                     1500
ggtgtagttt tgcgttttgt agtctctgtt ttctgactta aaactttgtt taagtgaaac
                                                                     1560
ccagacaaaa aaaaaaaaaa aaaactcgag
                                                                     1590
<210> 1046
<211> 1711
<212> DNA
<213> Homo sapiens
<400> 1046
ggcacgagcc aagatgttcc tcttgtcaac ttggccaacc ttttgattca ttacqqcctt
                                                                       60
catcttgatg ccactaagct gctacttcaa gctttggcca tcaatagctc tgagcctctg
                                                                      120
acctttttga gcctgggaaa tgcttacctt gctctgaaga atatcagtgg ggcacttgag
                                                                      180
gcctttagac aggccttgaa attaaccacc aaatgtccag agtgtgaaaa cagcctgaag
                                                                      240
ttgatccgct gtatgcagtt ttatcctttt ctgtacaaca tcacttcttc tgtttgcagt
                                                                      300
ggtaattgtc atgagaaaac cctgggacaa cagccatgac aaacagaaat attttggaca
                                                                      360
actcacagtc actggatgct gctgaagaag agccctctga gagaggaaca gaggaggacc
                                                                      420
ctgtattctc tgttgagaat tcagggaggg actcagatgc ccttagactt gaaagtacgg
                                                                      480
tggttgagga gagcaatggt tctgatgaga tggagaattc agatgaaacc aaaatgtcag
                                                                      540
aagaaatact ggctttggtg gatgaatttc aacaggcatg gcctttggaa ggctttgggg
                                                                      600
gtgcactaga gatgaaaggg cggcgtctag acttacaagg aatacgggtg ctgaagaaag
                                                                      660
gtccccagga tggagtggcc agaagctctt gctatggaga ctgcagaagt gaagatgatg
                                                                      720
aagcaacaga atggattaca ttccaggtca aacgtgtaaa gaaacccaaa ggagatcata
                                                                      780
agaaaactcc tgggaaaaaa gtagaaacag gtcagataga aaatggacat cgttaccaaq
                                                                      840
caaacctaga gatcactggc cccaaggtgg catctcctgg gccacaagga aaaaaacqtq
                                                                      900
actaccageg tetgggatge eccageeegg acgaatgeet caaacteege tgggtagage
                                                                      960
tgactgccat cgtgagtacc tggcttgcag tttcttcaaa aaacattgac atcacagaac
                                                                     1020
acatagattt tgccaccct atacagcagc cagcaatgga gcctctttgc aatggcaatc
                                                                     1080
tccccacgag tatgcatacc ctggaccact tgcatggggt ttccaaccga gccagcctgc
                                                                     1140
tctacacagg ggagagtcag ttaacagagg tattacaaaa tctcggcaaa gaccaatatc
                                                                     1200
cacaacagtc gcttgaacag attggcaccc gattgccaaa gttttggaaa agaaccagac
                                                                     1260
gtcctgggtc ctctccagca tggcagccct ctactggagg gtgaaaggcc aaggaaagaa
                                                                     1320
ggcaatcgac tgcctccgcc aggctctgca ctatgcgcca caccagatga aggatgtgcc
                                                                     1380
cctgattagc ctggccaaca tcttgcacaa tgccaagctc tggaatgacg ccgtcatagt
                                                                     1440
agccaccatg gcagtagaga tcgcaccaca ctttgctgtg aaccacttca ctctgggcaa
                                                                     1500
tgtctacgtg gcaatggaag aatttgaaaa agcactggtg tggtatgaat ccacattgaa
                                                                     1560
gcttcagccc gagtttgtcc cagccaagaa ccgaatccag accatccagt gtcacttaat
                                                                     1620
gctgaagaag ggacggcgct ctccttagtg cacttcttcc ttctctctt ctcttgactc
                                                                     1680
atgctctaaa aaaaaaaaaa aaaaaaaaa a
                                                                     1711
<210> 1047
<211> 2764
<212> DNA
<213> Homo sapiens
```

<400> 1048

```
<400> 1047
ggcacaggac aaacagatat gaggaagtat tgtcttggat tttgctattc agtatttatc
                                                                      60
cttggtcgtg ttttgaattt tatgcatctt caccttcttg catgtggctg tgctaagtgt
                                                                     120
tgatcttaaa gaggatagat tttcagcagg attgctaact ggtcctggct atgcctgttg
                                                                     180
cgtgctggcc ctggcacatc agttaatttc cttgaagctg tcttccacca cctaggaagg
                                                                     240
ggcaatggag atgggcctgt cttaattacc ttgaagttgg aatgggaggc tcagacaatg
                                                                     300
gattttgtaa acaacagtgt tgtgcagttg ttatatctga agatggtcat gaattctgct
                                                                     360
gacagaaatg agactttacc cagaagcaac gtgtgaaggc atgggaaggt ggtggcccat
                                                                     420
gtaaactgta cattgcttgt tttttggtgc aagcctcctc tgcctttatc ttacttcctt
                                                                     480
ttattgtttc caaatgtgtc cccttttttg gagaaattag gtcatattga aagacagctt
                                                                     540
gaagcactat tgtgttgcaa tctctcagcc tgacaacaga ccttaattct cattttcaaa
                                                                     600
ataactatcc aagttttcag ctagcagatc ccctccccca cccttctcat cccatttccc
                                                                     660
cttgcacttt tgtttcccca agtgacaggg gctgggcttg ctgatggggg tgtctgagtc
                                                                     720
agaaccagct caaaagaggg ggccactccc agggagggag tccaggaata gggtggggca
                                                                     780
gtgaacactc accccaggca cataatttaa gacagcacca aaagctcagc agtgggataa
                                                                     840
attatattt aacataacac ttaaaatatc aaaattatca gcaccacagg aaaggtaaca
                                                                     900
aatacaatat cggaatgaat acaggcagtc cctggtgaag aaaataacac gaccataaag
                                                                     960
gaagacaggc ttgggccgac tgattttccc tgttgccctg ggccctgata catacggctt
                                                                    1020
gtcaccacac agctactcat cctgccatta gttaaaagtt tcatattttg gtcatcatag
                                                                    1080
attttgtgcc ttgatttgga cttttaaaaa tattgcattc gaatattatt tcccctggtt
                                                                    1140
tctgaatttt gggggcaccc cattaaattt tgcacccaga ggaagttcct cattctcttc
                                                                    1200
tgccactggg tggcccttgg ctgaacattg gagtccttgt gctcagtgac aggcagggta
                                                                    1260
gagacgcggt ggaggggaag aacactggac ccaaagtcag gatcacggag cctgatcctg
                                                                    1320
tgtctgggga accetggggg agetgetttt ttgtcatatt tttgttttat ttgtttgttt
                                                                    1380
gagatggggt ctcgctgtgt ctcccaggct ggagtgcagg ggcctgatca cagttcactg
                                                                    1440
aagactcaac ctcccagctc aagtgatcct cccacctcag cctcccaagt agctgggact
                                                                    1500
acaggcatgt gccaccatgc ccactggctt ttttactttt tttgtagaga tggggtccca
                                                                    1560
ctgtgatgtc caggctgtgc ttttctgctc atctgtccag tgaagggctg gccatgtcct
                                                                    1620
gagtccacgt tgatgcagca cccgtcctct gagagcactg gagcctgcca tggccagctc
                                                                    1680
tetettgggt ceteagaggg acatgetece aaccecatet ttettttete ttgeegtetg
                                                                    1740
atctgagete etetececaa aatcatgaaa gggagacace ggagteteaa agtggeegat
                                                                    1800
ccagttgagt tttgacatgt gtgcattgcc aattcaaagt gcaggcaaac ttggtgggga
                                                                    1860
tgaaaaggat ttgatattgg ggtcagtaca gtgaatgctg gagtcggcct gagtgtttgt
                                                                    1920
cccggctcag agagcttggg caattaacct ctgcctgttt cctcatctat gaaatgagga
                                                                    1980
tactccctgc cccccatagg attgtgataa catggacatg aggttggata acctggacat
                                                                    2040
gcaactgaat ccttacgaga ccgcactctg caatctccac cctgcactgg tagaacacca
                                                                    2100
tectaggaaa gtetgettee aggeeecaga gtaagteetg gaaagtgage accaetggge
                                                                    2160
caaggaaaat cccccgcttc agacaggctc gtccctacct ccatcctagc aagttatgtc
                                                                    2220
aagccaagtg cctaggacta acacactgat acgtgctgta aaagtgcaga gggaggtgtc
                                                                    2280
aaccgcaaag cttccagcac aacaaacaaa ccagaaccat tccctggagc tccatagagc
                                                                    2340
agetggggee tettgeagaa etgeecacae etagettett gtacaetete etgetgeetg
                                                                    2400
2460
etctaggeeg ggtgtggtgg etcatgeetg tacteteage aetttgagag gecaaggtgg
                                                                    2520
gcagatcatt tgagcccagt agttccagac cagcctgtcc aacatggtga aaccccatct
                                                                    2580
ctaccaaaaa actacaaaaa ttagctgggc gtggtggtgt gcacctgtaa tcccagttca
                                                                    2640
ggaggtgagg tgggagaatc gcttgacccg ggaggcggag gttgcagtga gtcgaatcgc
                                                                    2700
gccactgccc ccagcctagg taacaggtga gaccctgtct caaaaataaa aatgttaaaa
                                                                    2760
aaaa
                                                                    2764
<210> 1048
<211> 1019
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (833)
<223> n equals a,t,g, or c
```

```
gtagaaataa atgaccaccc ccctggtaaa ttacaggcat gagccaccat gcccqqccca
                                                                      60
aagatgattt tttaaatgct caacaggaca aagcctaatg gtagtctttt gttaaaaaca
                                                                     120
aaatttaata tcaatccatt gacaggactc tttgtgtact gagctatata gtaatttcac
                                                                     180
cttaatagaa gttcttcata accaccccat ataaaaccat ccattcttat ctctttttt
                                                                     240
tttctccata ctgcttatca cagctgacac tttatactga ctttgtttcc ccctctatac
                                                                     300
cctttactcc agattataaa ttctgaggac agggtctttc tttcactgct ttatattccc
                                                                     360
actgcctaga atagtgccta acatatatta ggtactcatt atatatttat tgatgtcaaa
                                                                     420
tattgattgc tgtattatag tagtgttaat ggaaggtgtc atttcttaga ttttctttc
                                                                     480
tgaccagcac agttcttggg ttgatggagt atgtcctcaa taaatctcag catcaaataa
                                                                     540
acaagaattt tctttttaat acataaattt gtcattttgt tacgcttttt agtttcctca
                                                                     600
gtgatttttt agaataattc ttgttcatga atttgggatc agtgaatatc tacagttgga
                                                                     660
atcttaggaa ggaatgttaa tgggcaatcc agaatgttgg ataattaaat cagttatttg
                                                                     720
ccatttgatg tgtaatatag tggaccacat ttagacaaaa aacaagctac cccataagac
                                                                     780
cagtttttat tttctttgat tcatgtcttc aggattttct gttaactcag aantattata
                                                                     840
gcattcatta ttgttttgtg aaaatactag ttaataatct ccggttaatg aaataattat
                                                                     900
cttagataaa tttactgaac ttaatgtaga atatgttttt tgtttcgttt tgtttttgag
                                                                     960
1019
<210> 1049
<211> 1279
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1188)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1224)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1278)
<223> n equals a,t,g, or c
<400> 1049
gaattcggca cgagtcatga agggcttctt cctcattgtc ttcatgttga gtagggctga
                                                                      60
ggaggaggaa gatgaggggt tagtcttgct gtcttgcggg tgacagatgt ggaagtaaat
                                                                     120
cctcatgtag gtgggaatga gcagttcaaa cctatgttgt tcaagggcca actatagttg
                                                                     180
attaactcat atctctacag ttaattttca aacagatgtg atagctgaat gagaactttt
                                                                     240
aagatagtac tggacagtaa ccttattgga actggaatgg cctttagact ttttgtgtcc
                                                                     300
agtttcttct cacctcctct ttctcttcaa atgtgcaact gaaactgaga gacctcagtc
                                                                     360
ccatgtccaa ggtcaggcag atacttagcg gcagagtgag gactccagcc catttctgca
                                                                     420
gctctgctgt gcagtggaag atttgggaca agtacattat ttaaaaatgc ccacccacta
                                                                     480
aatattacat tootaacttt toocaataca caaatatgot tgaactttta aaagottgtt
                                                                     540
tttggtcgtg cttggtttgg aatgtgaatg actaaaacta cctttagcaa tttcccaaag
                                                                     600
tgtaagttca aatgtacaga gaatttttt cctgaatgcc caacacaata tgcagtttta
                                                                     660
caacacatac cagattetta gatteatttg gtgaaggaag cetetgaatt aaaactttta
                                                                     720
aatatttctg atttgcaacc agacgaaaaa gaagaaaatt gacaactttt ttgatgcaac
                                                                     780
tttgtgaaat catggtgttc ctggtttttc tggtctggtt tttgttgttg ttttgttttg
                                                                     840
ttttgccaca gtttagttcc tcacctgatc tttccttgta tccacttcag artctctgaa
                                                                     900
atgttatctg tttgttggtt cctgggaaat tgagagcctt tycaaagact ccatctagaa
                                                                    960
gcatatttaa aagtgtgaaa gaagacattt atgcgaccaa caaacatatg aaaaaaagct
                                                                   1020
tatcatcatg ggtcattaga gaaatgcaca gcagaaccac aatkagatac catctcatrc
                                                                   1080
cagttagaat ggtgatcact aaaaagtcag gaaaggccag gggcggtgac tcatgcctgt
                                                                   1140
aatcccagca ctttgggagg ctgaggcggg tgggatcacc tggaggtnca ggagtacaag
                                                                   1200
accageetgg ccaacatagt gaaneecate tetaettaaa aatacaaaaa ttagetgggt
                                                                   1260
gtggtggcgg gcactgtna
                                                                   1279
```

| tcccagcagg taaaatggaa tgtgcgcggt ttctctccag ccaagaaggg aaacaacaaa tgggctctgc gccctgggag attcttgctc gattgcagtg | actcggatga taaccttgtg atgatgaccc gctttgtaga cttgtttggg cagatttcaa cacagctgcc cagcggctca ccaggccgac aaggcctcct agccacgatg | gcagtcacta ctgggtctcc tgataaggca cagacaaaag aaggagcctt cctacctcc ccccagact tcttcacact tagaaattat gtgccactcc | acceteteta caggacegtg teteagaaac agaaategag getteaaact agteeacaaa ectgeaceag teeagteace teeteecatt actetageet | cacctcaatg aggggtcctg accggggctt cccagtcatt gaggaaaacc acagtctgtg ctggccttcc gacacagtgc gctcgaacct gggtgacaca | aatgcaaccc gggagttgga | 60 120 180 240 300 360 420 480 540 600 720 724 |
|--|--|--|---|--|--|--|
| <210> 1051 <211> 859 <212> DNA <213> Homo | sapiens | | | | | |
| gagtgagact gggtacagga tgaatttaat ctcagggtct tacttttatg gctccttatt aagtagattg atggcagggg taaggaatgt aggcaggcag atctctacta cacttaggag | gacgttgcag ctgtctcaaa ttttaaagtc tacctttgat gtgcttcatc agtaccagaa aataatttgc ctcatagagt aataggactt cggccaggcg atcactaggt aaaatacaaa gctgaggcgg gcactgcact | aaacaaaaac ccattatcaa tttaatttag atctccctgg aattatccaa ttctaagttt ttagctatcc gttgaaggga cagtatctca caggagttcg aaattagctg gagaattgct | aaaaacaaaa cacattcaac gaatgaatit ctttttttt agctaagaga ttgttagaga atgctttgtt gtgggaaaga cacctgtaat agaccagcct ggcatggtgg tgaacccagg | tttaaaaata tcagaatagt tttaaaatgc gtgctaattt agaaataaaa gtaggtaaaa tttaccttta agggatgcag cccagcactt ggccagcatg tgcgcacctg aggcagaggt | aattgaagta taatgtaacc atataaccag ttcctcttac cactgttttt acgtttggca gtttagtttt gtcttcataa tgggaggcca gtgaaactcc taatcccagc tgcagcgcgc | 60 120 180 240 300 360 420 480 540 600 660 720 780 840 859 |
| <210> 1052 <211> 1932 <212> DNA <213> Homo | sapiens | | | | | |
| tgatatgttt caccacatgg tcttgtgata ctttgcctgg ccttctccta ttaaaccttt tggactaatg tagtcatgaa ggtttttcta atattgtgta | taatagtttc aggctttgta agagaccagg gtgaatgagt tacttctcct taattgtaag ttctttataa aagttcccat atcctkgcck attttgtgtt tggaaggggt | tccccacca tggaggtaat tctcacgaga tcctgccgcc tttcctgagg attactcagt ttatgaattt gttctaagtc ttgcatttaa ccagtttcaa | aatctcatct tgaatctggg tctaatggtt ttgtgaaaaa ccttcccagc ctctggtggt ttgcttttgt caggatggta gtgtttaatc tcttttgcat | tgaattataa ggtggtttca ttatgagggg ggtgcattgc catgctgaac tctttatagc tgcaattgct wtgccwaggt catcttgagt atggctagtt | tctccataat cccatgctgt ctcttcccag atccctttca ttcaagtcaa agtgtgaaaa tttgacatct tgtcttccag tgatttttgt agttatcca | 60 120 180 240 300 360 420 480 540 600 660 720 |

```
gatcagataa tcatagctgt gtggctttat ttctgggttc tctattctgt tctattqgtt
                                                                     780
tatgtccctg tttttgtgcc agcaccatgc tgttttggtt aacatagccc tgtagtatag
                                                                     840
tttgaggtca gatagcctga tgcttccagc tttgttcttt ttcttaagat tgccttggct
                                                                     900
atttggcctc ttttttggtt ccacatgaac tttaaaacag ttgtttctag ttttgtgaag
                                                                     960
aatgtcattg gtagtttgat agaaatagca tttaatctgt aaattgcttt gtgcagtatg
                                                                    1020
gccttttaat gatattgctt cttcctatcc atgagcatga tatgttttcc attttgtttg
                                                                    1080
tatcctctct gatttctttg tgcagtgttt tgtaattctc attgtagaga tttttcacct
                                                                    1140
ccctggttag ttgtatttta ccctagatat tttattcttt ttgtgaaaat tgtgaatggg
                                                                    1200
attgccttcc tgatttgact gccagcttgg ttactgttgg tttatagaaa tgctagtgat
                                                                    1260
ttttgtacat tgattttctt tctaaaactt tgctgaagtt ttttttatta gcagaaggag
                                                                    1320
ctttgcggct gagactatgg ggttttctag atatagaatc atgtcagctt caaataggga
                                                                    1380
taattttact teetetette etatttggat geeetttatt tetttetett geetgattae
                                                                    1440
tctggctggg atttcctatg ttgaatagga gtcatgaggg agggcatcaa atctacacat
                                                                    1500
atcaaatact aaccttgaat gtaagtgggc taaatgcccc acttaaaagg taaagggggg
                                                                    1560
caagetgaat aaaaaageaa gaeteaatgg tatgetgtet ttgagaeeta teteacatgt
                                                                    1620
gatgacaccc atcggctcaa aataaaggaa tggaggaaaa tctaccaagc atgtagaaaa
                                                                    1680
cagaaaaaag caggggttgc atcctaattt cagaccaaac agacgtcaaa caaacaaagt
                                                                    1740
tcaaaaaaga caaagaaggg gccgggagtg gtggctcaca cctgtaatcc cagcactttg
                                                                    1800
ggaggccaag gtgggcggat tacaaggtca ggagatcgag accatcctgg ccaacattgt
                                                                    1860
1920
cccaatcgtc ct
                                                                    1932
<210> 1053
<211> 1302
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (158)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (749)
<223> n equals a,t,g, or c
<400> 1053
agctggcatc aggggccggc ctggaggtca gcgtgcaggg cccgttcctg agtgtgtccg
                                                                      60
tcctgctgcc tgagaagttc ctcacccaca cccacggcct cctcgggaca ctcaacaacg
                                                                     120
accccaccga cgacttcacc ctgcacagcg ggcgcgtncc tgcccccagg caccagtccc
                                                                     180
caggagetgt teetgtttgg ggeeaactgg accgtgeaca atgegteete cetgeteace
                                                                     240
tacgattcct ggttcctggt ccacaacttc ctgtaccaac ccaagcacga ccccaccttc
                                                                     300
gagcccctct tccccagtga gaccaccctc aaccccagcc tggcacaaga ggcagccaaa
                                                                     360
ctatgtgggg acgatcattt ctgcaacttt gatgtggcag ccactgggag cctgagcacg
                                                                     420
ggcactgcca ctcgggtggc ccaccagctg caccagcgtc gcatgcagag cctgcagcca
                                                                     480
gtggtgtcct gtggctggct ggccccacct cccaacggac aaaaggaggg caacaggtac
                                                                     540
ctggcgggtt ccaccatcta cttccactgt gacaacggct acagcctggc cggggcagag
                                                                     600
accagcacct gccaggctga cggcacctgg tcctcaccca ccccgaagtg ccagccagga
                                                                     660
cgcagctacg cggtgctgtt gggcatcatc tttggggggcc tcgcggtggt ggcggcggtt
                                                                     720
gcgctcgtct atgtgctgct gcgccgcang aagggcaaca cgcacgtytg gggtgcacag
                                                                     780
ccctgatggg agcagcttgg ctgtgagcac caggccaaga ctcctgagaa caggcagccc
                                                                     840
agtcctgcga ctyccgcatc cccaggacca gacacctggg acctggatac ttgatacctg
                                                                     900
ggcatttaac cccctactct gtcatctcag accccaggca ggaggcccag tgttccaaca
                                                                     960
cccaagcccc gtgctagcag cgctccgtgc tcttccccaa atactcacgg ctctaattcc
                                                                    1020
ccaaacctga aacttcatac cctgggattc taatacctat gtcctgagcc ctgacactcc
                                                                    1080
cacacctgag cctcagattc caatarctca ytccctarar cctgackccg gggcccctga
                                                                    1140
cccctgarcc tyarawtcca atacctyact ycccagagcc tgatgccggg gcccctgacc
                                                                    1200
cctgatctac ggaggcctgc tcccggaccg tgcgggcacc agtgcagagc tgccttggtt
                                                                    1260
cctggacccc tgggcccatc ctgggacccc agatggggta ag
                                                                    1302
```

```
<210> 1054
<211> 545
<212> DNA
<213> Homo sapiens
<400> 1054
ggtgaaatag taccttgagt ttaaatagaa tgcatttagg cattgtagag atctgaaata
                                                                   60
gttttcttcc actacattgt tgaaatcaat gaagcaatta gtttctcatt cagaaatgtg
                                                                  120
cacactaata tttagttttg ctttctcgtg gataatatta agcacttact ctgcagtttc
                                                                  180
ctggaagttg tgtcaactgc agtgatacta ttcaggatgg tgggaaatcc ccaaaaatat
                                                                  240
gtatgtgtgg gcttgcttag attactatat ttcatagtta atcttttgtc tcttgcggtg
                                                                  300
ctcatgatgt gtggggcaca cggaaggcat tgctgtagtc agtcattttg gttttcttct
                                                                  360
atagccattt tattatttta gtgtattagt tatgaagata atattatcta tttgtaaatt
                                                                  420
gctactttgt attttatgca tgctctgtaa tttgattttt ttttagttat tgatttggat
                                                                  480
540
aaaaa
                                                                  545
<210> 1055
<211> 1141
<212> DNA
<213> Homo sapiens
<400> 1055
ggcacgagtc tgcatcttga tgatcggtgg taggatacac agtttataaa cgaacctgag
                                                                   60
gctaacaaat actgtcactt ttcttaagtt tacacagcct attggtggca gatctgggat
                                                                  120
atggatetgt teggttteag agecetgett teettteaet ggaatgtget ettegettta
                                                                  180
gccctttttt tttttttt ttggtttctg ctagccttta tttgagaaaa tttacacaaa
                                                                  240
aatccccaat gcaacattta caagtgaatc tgtataaatc ccatatgcct gtttcccaaa
                                                                  300
ctgaaaaatg gctttatgac aggggtccat gacaatggta taaaaatact tacttaaact
                                                                  360
gcatcattct catttatatt atacagacca ttttggataa tatgctcaaa agtggaggaa
                                                                  420
agcacataac acccctgttt tttaagatta tttgctcttg tatcagtctt ttgtcaaagg
                                                                  480
caaatacttt tacttcttgg ataaaaccaa ggtataatat caattaactt ttaaaccaaa
                                                                  540
agcacaaaat gtcctagttg atagttttgg catgagtaaa gggaagggac atgagagaac
                                                                  600
atcagetect acaaagetta agtttagggt cacaettggg aacaaaagea teaacaaaac
                                                                  660
aaaatattct cttctcctat cttcttgaca ttttgtcaca tcagaagaac ataactaaca
                                                                  720
gagtagcttt cattgctcct gaaaagggga aaggcaccag tcagaaatag gaaagaaaat
                                                                  780
cttgttaggt taatggtaca tgatagaatt tcacattaaa aagtttaatg atggaggatg
                                                                  840
ggcgtagtgg cttacactgt aatcccagca ctttgggagg ctgaggtcag tggatcactt
                                                                  900
gaggtcagga gttcaagacc atcccggcca acacggtgaa actccatctc taccaaaaat
                                                                  960
acaaaaacca gccaggtgtg gtggcatgca cctgcactcc cagccactct ggaggccgag
                                                                 1020
gcggaagaac tacccgaacc caggaggtga aggttgcagc aagctgagat agcaccattg
                                                                 1080
1140
                                                                 1141
<210> 1056
<211> 656
<212> DNA
<213> Homo sapiens
<400> 1056
gagccagcgt ttaacgttca aaaggcaaat aactgatgac caggcggcac attgttctgc
                                                                   60
tccgtgagtt ctggcactgg gaaaggtgta gattgtctag aatgacagca attccgacgc
                                                                  120
cccagtcagt cctgcgtgat tgtggcgagg gcgcgtctgg caccgggaag gtgtagatca
                                                                  180
tctagaatga cggcgattcc gacgccccgg tcagtcctgc gtgattggcg agggtgcatc
                                                                  240
tgtcgtgaga attcccagtt ctgaagagag caaggagaca gattcccgcg tagtccaagg
                                                                  300
cattggctcc cctgttgctc ttccttgtgg agctccccct gccccactcc ctcctgcctg
                                                                  360
catcttcaga gctgcctctg aagctcgctt ggtccctagc tcacactttc cctgcggctg
                                                                  420
ggaaggtaat tgaatactcg agtttaaaag gaaagcacat ccttttaaac caaaacacac
                                                                  480
ctggctgggc tgtaaacagc ttttagtgac attaccatct actctgaaaa tctaacaaag
                                                                  540
gagtgatttg tgcagttgaa agtaggattt gcttcataaa agtcacaatt tgaattcatt
                                                                 600
656
```

| <210> 1057 | | | | | | |
|------------|--------------------------|------------|------------|------------|------------|--------------|
| <211> 798 | | | | | | |
| <212> DNA | ganiong | | | | | |
| <213> Homo | saprens | | | | | |
| <400> 1057 | | | | | | |
| tgagcgcgtg | gtgctgatac | cgccatggtc | gcgggcttga | tccccgcacc | ggccctagtc | 60 |
| ccagttttt | gttggtttgt | ttctttgttt | tctccccatg | aactgtttct | gcaactcttt | 120 |
| ttcaaaatgc | gcctttcagg | ttctgtaagc | cccatgcggg | caggagcgac | ttgcgggatc | 180 |
| | ggcccagagg | | | | | 240 |
| | ggggcggtgg | | | | | 300 |
| | cgcgcgggct | | | | | 360 |
| | ctccaggggc ataacaccaa | | | | | 420 480 |
| | ttttttcccc | | | | | 540 |
| | ctttcgggta | | | | | 600 |
| | cgcccagagg | | | | | 660 |
| | gggcggtggc | | | | | 720 |
| actcaggata | tccaaagcga | tccacatctc | cagcctgggc | aacagagtga | gaccgtctcc | 780 |
| aaaaaaaaa | aaaaaaa | | | | | 798 |
| | | | | | | |
| <210> 1058 | | | | | | |
| <211> 1221 | | | | | | |
| <212> DNA | assissa | | | | | |
| <213> Homo | saprens | | | | | |
| <400> 1058 | | | | | | |
| | gattccagag | aagaaagtag | atgggagcaa | gtgtccaata | cagcaacagc | 60 |
| | aataaagaat | | | | | 120 |
| | taaagacttg | | | _ | | 180 |
| tacatttaca | atacaaaatt | actatttaat | aatttacaca | tggcattaat | tctaattgtg | 240 |
| tttaaatatc | agagcttttt | caggcttcat | tcatgtaatc | aacagccaca | tgctaaggta | 300 |
| | cagtggaatt | | | | | 360 |
| | taaaaaacag | | | | | 420 |
| | gcagggcact | | | | | 480 |
| | ctttctggtg | | | | | 540 600 |
| | agaggaaaga atccagtttg | | | | | 660 |
| | taacttgaca | | | | | 720 |
| | ttttcctgag | | | | | 780 |
| | cctgtcaagt | | | | | 840 |
| | aggtctgttg | | | | | 900 |
| ttttgtttc | tgagaatcgt | ttcagtgtgc | tggctgacag | ttccatgagg | atggcaaaac | 960 |
| | gtagagccaa | | | | | 1020 |
| | gatgaattta | | | | | 1080 |
| | cattagatgt | | | | | 1140 |
| | ggaatgccat aaaaaaaaaa | _ | cactttattt | ctaaaataaa | cctaaattta | 1200 1221 |
| actaaaaaaa | aaaaaaaaa | a | | | | 1221 |
| <210> 1059 | | | | | | |
| <211> 438 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1059 | | | | | | |
| | cgacatctac | | | | | 60 |
| | gagcagtcag | | | | | 120 |
| | caatggctgg | | | | | 180 |
| | aactgtgaat | | | | | 240 |
| cccccigacc | tcaaaggcta | gergegeata | getettgaca | creeeggeea | tetetgtggg | 300 |

| | ctcggatctg aacttctcaa aaaaaaaa | | | - | _ | 360 420 438 |
|--|--|--|--|--|---|---|
| <210> 1060 <211> 442 <212> DNA <213> Homo | sapiens | | | | | |
| tcatgtctta gggaaaagcg cgggcccac cgtggggacg tccctgctcc gtctcagccc | agcgtgcctc agagtatatc cctctgccag tcaaggatgt gggctggcct taccctcaag actgctgaca aaaaaaaaaa | tggctccttg agtccaggcc agggcctttt tgggaggagc ggcctggggg cttctgcaat | accagcaatc ttgggatgac ctggcccctg ggcaggggca ctgcccagct | ggccctggga agacagcttg acccctccct tcacctcctt gcctctatgc | gccaccaggt cccgcacact ggcatgggag ctgctgcttc ccttctgggg | 60 120 180 240 300 360 420 442 |
| <210> 1061 <211> 542 <212> DNA <213> Homo | sapiens | | | | | |
| catcacaggt gcacataata ttccttaccc tgaagaaaag caacatctat ttttatataa aaaagtctct | caagttgatt tgacatccca gaatttatga tccagagtta taattttta gctgtgtggc atagacaagt cagttaccca tcctctcctg | gcccaaagct gcattttcag ggtgtggaga aaggaggttt tattacccct agggtgatat gggcacctgg | gaggaaaaat tgttttgatt gattatgttg ctactgtgtt aaacataaag tttccttggt gagagagtga | gtctcttgtt tttttcccca gcctgtttcc atttcacatg acacagaaat ctcgtgccga gggaacagtt | acatttttg gtcactgtta atggtgacac catgaaacat ggttggagta ccctagtaac ctgttcagtg | 60 120 180 240 300 360 420 480 540 542 |
| <210> 1062 <211> 1060 <212> DNA <213> Homo | sapiens | | | | | |
| <220> <221> SITE <222> (1060 <223> n equ |)) uals a,t,g, | or c | | | | |
| aagagggag gaagactttg caggtggtca gtcgggggtg ttgaccattc gacacctttt gcaataatgt gattagttag ttgacaatat ttttttaaa ccagcatcaa tggttcaggg | ccgcctcact actggagtga aggaatgaga gccgaccct agatgccata cccttatttt cactgaggtt ttgctttaaa aacttcagat ttatactata gcagtaagtt ccctatggc cttaggggag acgtgtcccc | aagtgaactc gacaaatgag ttccctggga ttgattacag tcatctagag cttaccagct aagatttctt catcagatca ccaaactcat tatagaaaat atgcattccc aacaggccac | tgcttttgcc gtagagctca accccacttc ggcagcaaaag gaatctcgga cagccaaatc gacctatgcc gtctcaaatg ttgcagttct gttttcattt agtggccttc atggcaacag | ctcactgaag cctgtgctca tctctgtggc aaccagtacc ttcagccctt tccactctgc ttttcttaga ggtttcttgg taggtttgtt aatggaaggc tcatctgggc ccacacagtc | ccaaaccaca ccagctccgt tggcttggtt aggaatttac tcattgctaa tatagcagaa aagtttgata aattttatat ggttaaaaca tggggaatgt ctggaacctt attgccttca | 60 120 180 240 300 360 420 480 540 600 660 720 780 840 |

```
ttgatacaat aggtcgttga ctccctccta gtagagctat ctaggtttgt ctggaaagtt
                                                                     900
tecgaeeetg gettatagge accaeeete atgtaeteet catggettgg atetetgtat
                                                                     960
tcagcctttg ttcagtccaa taaactttga gtagatgatc tcaaaaaaaaa aaaaaaaaa
                                                                    1020
aaaaaaaaaa aaaaaaaaaa aaaaaaaacn
                                                                    1060
<210> 1063
<211> 1240
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1039)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1052)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1063)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1076)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1175)
<223> n equals a,t,g, or c
<400> 1063
ggcacgagct cagcaggtta atgagagtcg ctgtggggca ggcattgcaa ataatggtga
                                                                      60
ttgcatggtg caccggcctt tctttagtag cagaagccct tctgtgtaag ggcaagagca
                                                                     120
gggccactgt gacaggggag gcccagaggc ctcagcccca cactgggctc ctctgcaggt
                                                                     180
tgcccctgga cctaagagtg ctacacctct ggaaaacagt gtggagagca gtgctgtggc
                                                                     240
ctggagggag gaggacgcag ctagcaggca gttagtcggt tccctgggca tttcctttgc
                                                                     300
etccatagge etcettgeet ecagtgatet gttageaggt gttgggtgat ggtgeeceet
                                                                     360
agtggacagt ttgcacaagg gcacccacac tacctcaggg cttttggttc ctgcagtggc
                                                                     420
gggctccccc attgtcggct ctgaggtact tctgagaagc ctcgggacca gcccaaagct
                                                                     480
ataaacgtag agctsgtggg ctttgaagta ctcactcccc attgagggat tattttcttc
                                                                     540
tcctcagggt actcctagga ggccttgaat tcttcggggc ctctttagag tggggctggc
                                                                     600
ctccctgggc tccggtgcca gccgggtgta gctactgggt gcacccaaga ttgtgaggag
                                                                     660
gggaggaggc gtgttgtgca cacgtgtatg gggtgagagg cattataggt gtggcctggg
                                                                    720
gatgccggcc tccctctctc cgtcaggaaa gccagcattg ttgccgcacc taggaggcag
                                                                    780
caaggcgcgg tgacaggaat gtgtcaggac acaaactcag gcttcactgc cagctctgcc
                                                                    840
atatgeteat ggttacetga agtgtataca ceacegtgtg tttgttgget ggggetgeea
                                                                    900
taacaaaata ccacagacga ggtggcttca actacagaaa cgttcttttc tcacagttat
                                                                    960
ggaggctggg agcccaargt cactgtgaaa gcaggtttgg cttcccctgg ggccgctctc
                                                                   1020
ccgggtttgt gctggccgnc tttttggtct gnccttacat ggnctattct ctgtgngggc
                                                                   1080
gccttcctgc tgctcttcct cctcttataa ggaataccac acacacaca agacacatac
                                                                   1140
acacacata atgccacaca cacaccacac acacnacacc atacacatat gccacacaca
                                                                   1200
1240
<210> 1064
<211> 826
<212> DNA
```

<213> Homo sapiens <400> 1064 ggcacgagca gaggttaaac tgagaggctc gtaattccct gggtcttatc ttttacttta 60 aaatgaaatg gcatgtgcta ttttctagtc attagcatca ttctctgtat tttcagacta 120 tttaatagtc aaatgtatat gattctccca tgttttttaa aaaaaaatct tagtattatq 180 tgaaatacaa aactagcatc tcctttagtt acagtatttt ttacttagtc taaaattatt 240 gtgattgtag tcattaatta atgtcctttg ctattatgaa aatgaagctg tttgctttag 300 tacttttacc catagaggaa atattttgtc atttataaag ccgtattgct actacatata 360 tctaaatgac tttttatttt ttaattgttc ttcattaatt ttagtgaatc ttagtatgtg 420 aatgtattac tggaatatga agcttaaaat ggtttgttct atctcaggaa tattgtaaaa 480 aacatagttt tcatactacc tatgtatttc tgtgatgtgt cttgtaaagt atagtcaaat 540 aaattattaa taagattcat cattttagtt atttctttt ctcatactct acactattga 600 catctatttt ctcccatacc gtcacaattt cacctttagc tagttcacca aagagcccaa 660 tattatattt tcatttgact ttaagaaata aaaagaggtc gggcatggtg gctcacagct 720 ctaatgccag cactttgaga ggccaaggca ggagggttgt ttgaggccag gagttcaaga 780 ctagcctggt caatgtagtg agacctcgtc tctaccaaaa aaaaaa 826 <210> 1065 <211> 1174 <212> DNA <213> Homo sapiens <400> 1065 ggcacgagca catgtcaagg tgatgacgca cttccaaatg ggttagacgt tacctttgaa 60 gtaactgaat tgaggagatt aacgggcagt tataacacca tggttggaaa caatgaaggc 120 agtatggtac ttggcctcaa gcttcctaat cttcttggtc gtgcagaaaa ggtgaccttt 180 cagttttcct atggaacaaa agaaacttcg tatggcctgt ccttcttcaa accacggccc 240 ggaaacttcg aaagaaattt ctctgtaaac ttatataaag ttactggaca gttcccttgg 300 agctcactgc gggagacgga cagaggaatg tcagctgagt acagttttcc catatggaag 360 accagccaca ctgtcaagtg ggaaggcgta tggcgagaac tgggctgcct ctcaaggacg 420 gcgtcatttg ctgttcgaaa agaaagcgga cattcactga aatcatctct ttcgcacgcc 480 atggtcatcg attctcggaa ttcttccatc ttaccaagga gaggtgcttt gctgaaagtt 540 aaccaggaac tggcaggcta cactggcggg gatgtgagct tcatcaaaga agattttgaa 600 cttcagttga acaagcaact catatttgat tcagtttttt cagcgtcttt ctggggcgga 660 atgttggtac ccattggtga taagccgtca agcattgctg ataggtttta cctcggggga 720 cccacaagcg tccgcggatt cagcatgcac agcatcgggc cacagagcga aggagactac 780 ctaggtggag aagcgtactg ggccggcggc ctgcacctct acaccccatt acctttccgg 840 ccaggccagg gtggctttgg agaacttttc cgaacacact tctttctcaa cgcaggaaac 900 ctctgcaacc tcaactatgg ggagggcccc aaagctcata ttcgtaagct ggctgagtgc 960 atccgctggt cgtacggggc cgggattgtc ctcaggcttg gcaacatcgc tcggttggaa 1020 cttaattact gcgtccccat gggagtacag acaggcgaca ggatatgtga tggcgtccag 1080 tttggagctg ggataaggtt cctgtagccg acacccctac aggagaagct ctgggactgg 1140 ggcagcagca aggcgcccat gccacacacc gtct 1174 <210> 1066 <211> 1502 <212> DNA <213> Homo sapiens <220> <221> SITE <222> (477) <223> n equals a,t,g, or c <220> <221> SITE <222> (496) <223> n equals a,t,g, or c <220>

```
<221> SITE
<222> (513)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1279)
<223> n equals a,t,g, or c
<400> 1066
ggcacaggtc atctctggca ggaagattgg agaaacggac tcatgccatg gactgtgatt
                                                                      60
                                                                     120
tagaatggag gacctcattt cagcttcctt gcgctgaagt ggagggccgg ttttcacatc
cagacttagt atgccacaca cagacacaca cacaccggaa acaaagtttt atgtaaaaat
                                                                     180
                                                                     240
atttttgctt actgcttact ttaaaaagca gtttccttac gatatgatac gcactgtgat
                                                                     300
attttccact ctattccttt attcagtgcc aggcatgacc tactccatag atttcatgac
ccactaatgg gctgcagtgt gaggtttgaa acctckgccc agaggcagat tctgcatgct
                                                                     360
tatttagagg aatgtctgtc tagacgagag agattcatag aaaggagatc atttatggra
                                                                     420
                                                                     480
aaatmcagat attcatggac tttatcacca ggattctact ttgtttctcc tcctgcnttc
                                                                    540
attacccagg cagranctgt atcttcaaat gcntcgtggg tctgcgtaca agccctacag
                                                                     600
gtgccccaaa gccatgtgca gagytaagca ccccattttt ctcataactt gacccctctg
                                                                     660
cctgragete tacteceget cetetggece teetetgtge tgecetecea aategeceea
gctaaaaatg ttggcagtcc cttccatacc tgtctttctt attctgcaca tccgctcatc
                                                                    720
tcaagggact attgattctg cctctaaaat tgctgccagc tctgtgtcat cttttccatt
                                                                    780
aatatagcta ttgccttcat catctctaac ctggagaaca ggaagagaat tcctcatact
                                                                     840
ctccctggtc tagaaggtga cagaggggct gtttttgtgg ggtgttccga tccaacctga
                                                                    900
tcatgtcctt tcccctccc caagccctca gcatggcccc tgcagtctcc tcctcagcac
                                                                    960
ctctccagct atggttcttc tctccttgca cagtgcagcc atttattaac catgtcgtct
                                                                    1020
actgaattca accaaacaga gctgtatatt ttctctgtat caggaaaatg aaaamgcctc
                                                                    1080
caccatagaa tottaaaatg tgtttottta ggatcatott agccactggt totcaaccat
                                                                    1140
cattacacat tagaaccacc tggggagcct taaaaatacc caaccccggc cgggcgcggt
                                                                    1200
                                                                    1260
ggeteacgee tgtaateeca geaetttggg aggeegagge gggtggatea tgaggteagg
                                                                   1320
agategagae cateetggnt aacaaggtga aaceegtete tactaaaaat acaaaaaatt
                                                                   1380
ageegggege ggtggeggge geetgtagte ceagetaete gggaggetga ggeaggagae
tggcgtgaac ccgggaagcg gagcttgcag tgagccgaga ttgcgccact gcagtccgca
                                                                   1440
                                                                   1500
1502
<210> 1067
<211> 814
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (480)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (504)
<223> n equals a,t,g, or c
<400> 1067
ggcacagcgg cacgagtttg ttcattcttt catgcattca cctcttattc agctaagact
                                                                     60
tcagctgctg ttatgtacca aagggtatag gaacccttcc cagtcttcct gagctgctcc
                                                                    120
tagtccttat ttagttcgtt ttttatacca atatagctct tcttcctcct tgtcctcttc
                                                                    180
gtccatcacc acttcgtgtt tttaggctta ctgcaaatcc caactttctt gttcttgttt
                                                                    240
tggtattgca agcttgccgg ctggctccat tggctcactc attatcctct ccatcacatt
                                                                    300
cttttcttca cttactactg agtgatgcat atgtctgtgt ttgtctgtct ctcctaattt
                                                                    360
agatttgatt aacctgtatc cccagtgccc tggcatatag tatttgttaa gtaaattaat
                                                                    420
ggataaattc agaattgatc ccttttttgc cttctgtgct ttattctcca ttatgttatn
                                                                    480
```

| | | | | • | | |
|---------------|-------------|------------|-------------|------------|------------|------|
| cccaccttgt | gctattgaaa | aaanggaact | tcaggtcagg | tgcagtaact | catacctata | 540 |
| | tttgggaggc | | | | | 600 |
| | catggcgaaa | | | | | 660 |
| | ctgcggtctc | | | | | 720 |
| | ctatggttgc | | | | | 780 |
| | aaaaaaaaaa | | | gcaacagagc | gagaccctat | 814 |
| cccaaaagca | aaaaaaaaaa | aaaaaaaacc | cgag | | | 014 |
| -210> 1060 | | | | | | |
| <210> 1068 | | | | | | |
| <211> 1303 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1068 | | | | | | |
| | ttccacctaa | | | | | 60 |
| | tgacctactc | | | | | 120 |
| actgtttaat | ccctgttcaa | ataaggtaaa | tgccaagctg | taaccaaccc | agctgtttct | 180 |
| gtacctcact | tccattttct | gtacatcatt | ttccttttta | tgtccataaa | tcttgtctat | 240 |
| gtggcagctc | cagagaatct | ctggacctat | tttgattcag | gggctgctca | acttatgaat | 300 |
| | ttaaactcca | | | | | 360 |
| | cataatctcc | | | | | 420 |
| | accctgtctt | | | | | 480 |
| | ctaacagtat | | | | | 540 |
| taataagagg | ttaacagaca | ttatatocta | acctcacata | aatattacct | actactecta | 600 |
| | gaataatata | | | | | 660 |
| | | | | | | |
| | ctccttttcc | | | | | 720 |
| | gacgtatgca | | | | | 780 |
| | ccctacaata | | | | | 840 |
| | tccctctgcc | | | | | 900 |
| | ctcttggcat | | | | | 960 |
| ataggacagg | aaataaaaac | tctgaggcca | aggtctccat | ggcccacatc | cccatctgtg | 1020 |
| | agctattgct | | | | | 1080 |
| acaatttcct | gagtgtatct | gaatgaatgc | aagttatttg | gaatgagtgg | ttgcttttta | 1140 |
| gtctcaatac | tggctttata | ctctacctct | cgtcttttcc | tgttccatct | cctatcatcc | 1200 |
| | gggagcatgt | | | | | 1260 |
| | tccactgctt | | | | 3.3.3 | 1303 |
| | J | 3 3 | 5 | | | 2000 |
| <210> 1069 | | | | | | |
| <211> 1522 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | saniens | | | | | |
| 12101 1101110 | Dapiens | | | | | |
| <400> 1069 | | | | | | |
| | catactett | aagggatgga | gagtaagtta | 2+a+++2+2a | | 60 |
| cttccatttc | catagtettt | ccacccaatc | gactaagttt | ttaataassa | attacament | 60 |
| ctcccatttc | aaaggcttcg | ccaycyaacc | ccgtgagtca | tteetggaae | ctteaggagt | 120 |
| cccatggtg | atggggttga | gragaceraa | gggaagccag | cattcactcc | acttcctaac | 180 |
| | tttctgattt | | | | | 240 |
| | ttttttaaa | | | | | 300 |
| | acccattcta | | | | | 360 |
| | aacaaagcac | | | | | 420 |
| ttcctgcaag | tgttttcaga | agggatctgg | ttttcttgtt | ttcctcagtg | aaaagatgaa | 480 |
| aaggctctgg | gtaactgatt | gtagcctgaa | gcagagatgc | cggcagcatc | aagcccagag | 540 |
| | ctgtctagcc | | | | | 600 |
| tatgcccagt | catggttggc | agaactgtgc | atattcttat | aatccccacc | tctccttcat | 660 |
| | tctggaagar | | | | | 720 |
| | gtacaggaaa | | | | | 780 |
| | attaaaattt | | | | | 840 |
| | aattctgtgt | | | | | 900 |
| ctgagggtga | aaatgagttt | tcagtaacat | tgaaaacttg | aattctgctg | acttcottat | 960 |
| ccctcaggt | tgaagcagga | catacaaatt | cctgaggttc | taccccaaa | tttctaaaaa | 1020 |
| tettagagag | attctcacca | tatactaca | ctctagagag | tacaaccaat | ctctactaat | 1020 |
| agcttaaaat | tgccaaagcc | ttacccaaaa | ctagaaaaa | aggtggcaat | carcttttct | 1140 |
| | - goodaagee | 23999 | | ~yyryyyad | caycullit | 1140 |

| ctgctgtgtt | agtcgctgtg | tggggcccca | cagcaaggct | gcttgagcct | tcattgacca | 1200 |
|------------|------------|------------|------------|------------|------------|------|
| | ttttgcttcc | | | | | 1260 |
| | caggttaaag | | | | | 1320 |
| | ctaacaggtc | | | | | 1380 |
| | tgaaaccttt | | | | | 1440 |
| | ggtaacattt | | | | | 1500 |
| | caggaatttt | | | | | 1522 |
| | 33 | | | | | |
| <210> 1070 | | | | | | |
| <211> 1572 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1070 | | | | | | |
| | gaccccgtcg | gggtccagat | caggtcactc | taccccaata | ctctcttact | 60 |
| | aagggggcat | | | | | 120 |
| | agaaaggtga | | | | | 180 |
| | tgtgtttgtg | | | | | 240 |
| | atgtgagtcc | | | | | 300 |
| | gcctctgtct | | | | | 360 |
| | aggttgcaca | | | | | 420 |
| | ccaaatccct | | | | | 480 |
| | aggacccaag | | | | | 540 |
| | ttgatggaca | | | | | 600 |
| | gctttggggc | | | | | 660 |
| | gggaagagaa | | | | | 720 |
| | gctccccagt | | | | | 780 |
| | ttcccttcct | | | | | 840 |
| | tgaatttgtt | | | | | 900 |
| | gaattttgct | | | | | 960 |
| | tccagagttg | | | | | 1020 |
| | ccttctgaca | | | | | 1080 |
| | ttcatgcatc | | | | | 1140 |
| | aagacttgtt | | | | | 1200 |
| | aagggatagg | | | | | 1260 |
| | agtgggaaga | | | | | 1320 |
| | tccacaccct | | | | | 1380 |
| | tccctttcct | | | | | 1440 |
| | tataatgtaa | | | | | 1500 |
| | ttaatatatt | | | | | 1560 |
| aaaaaaaaa | | | | | | 1572 |
| | | | | | | 13,2 |
| <210> 1071 | | | | | | |
| <211> 1631 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | _ | | | | | |
| <400> 1071 | | | | | | |
| gatcccccgg | gctgcaggtt | cccctctatg | tgtccctgtg | ttgtcatcat | ttggctccca | 60 |
| cttataagtg | agaacatgca | gtatttggtt | ttctgttcct | gtgtaagttt | gctaagggta | 120 |
| | gctccatcca | | | | | 180 |
| | tagcatctat | | | | | 240 |
| | cagagagcag | | | | | 300 |
| | gtgctaaagc | | | | | 360 |
| | ttttttgttt | | | | | 420 |
| | aatatatatc | | | | | 480 |
| | tgatcctgca | | | | | 540 |
| | tggctgtgtg | | | | | 600 |
| | ctcaccgaag | | | | | 660 |
| cagtgggaac | ttcacatatc | tcctttgtgc | catatgcaaa | aaatagtaaa | aataataatt | 720 |
| tggtgccttt | ctcctcaaaa | tatcaatctt | tcaaactata | ataaagcctt | tcctataatt | 780 |

<220>

```
840
gaaaaaaaaa acttttttgt taaaggtaat ggtggttgtt acttggcctt tgaagagtgt
                                                                    900
acctttgtaa gtatttgtaa gaagtctatg tgaattagga aatgtctgtc tgcatacctt
                                                                    960
ttaggagcgt gtgaatggtg tcttcactta ttatgtatgt ttatctgtat gtatattcct
tattttgtca tatatgtaga gaaaattgca tgacttgagg catcatttag gttgaagaag
                                                                   1020
ttaatgctta ggatgcattc taggagaaaa aatcagtttt aaaaaccttt gttgttaaca
                                                                   1080
                                                                   1140
aagtatatcc agattggtta attttattga agggtttttt tctgtaattg ataaaaatgt
aatgacaaca attcaggcat cataaaatac tgaactattg tgactttatt cttagaattg
                                                                   1200
ctgtcttaca ttaaacatgt ttttaggggg aagttaggta ggagatagaa aaataagtgc
                                                                   1260
ccctacaagg gggattaaaa ttacaagtta attcctaaga gaaaaatgga atggcctttg
                                                                   1320
aaggaaaaat gacccactat ggctctcaaa gtttttatgc atcatctctt caatcctcta
                                                                   1380
                                                                   1440
agaaagcctc ttttcttaac ttgataaagc agtggaaacc cattttgcaa tattgttttg
                                                                   1500
tgaaaaacag ggacagacag ccaggtacag agactcacac ctgtactccc aactactcag
                                                                   1560
caggctgggg caggaggatt gcttgagccc aggagtctga ggctacagtg agctatgaac
1620
                                                                   1631
aaaaactcga g
<210> 1072
<211> 1902
<212> DNA
<213> Homo sapiens
<400> 1072
                                                                     60
ggcacgagat cggcatgagt gtaacagtga taacctgatc tgtttgtttt aaagattatt
accaagtgaa aaattcagaa tgaatagaat ttacactaac atgctatata aaatgttaaa
                                                                    120
gtctgatgct gtgaaagcaa tctagtgcta tatttctacc tcctcatttg tcttaattat
                                                                    180
ttggtaagtg ggattatgat gagtaactgg aggggcttag aaacaaaaac tggatgaaag
                                                                    240
                                                                    300
agtatgcatg aagaaaagct tctttgataa atgtggagtt cttcattata aatatatatt
                                                                    360
catgaattca cagataagta cttaaagaac agacagttta cttggcctaa aaatattttg
                                                                    420
atgtttactc aaaaagtacc tcttcaggtc ttgagaacat ggaaaagaat tgagtgcttt
                                                                    480
taaatacttt ttagaaagta atcataaaag taaattgaat ttcaaaccta tttggcttct
                                                                    540
gttttgtgaa cctttgaact atatgtatgt gtataagggt atacacatac atatatggca
                                                                    600
tataacaagt gtacacatat acacataaca agtgtagaag tatatattac atacatacac
tcactctgtc tggtataggc taattttgaa gaactcccat aagtttctgc tgcttctccc
                                                                    660
                                                                    720
ataactgctg ccaccaccat cagaatcata atcaaaccta acctttttgt ttggggcacc
aaatctgaag acaaaattaa tttgcaccag taaacttcaa gctgctttct ttcttgaaaa
                                                                    780
ctaaacgttt aacgtataat gtctgtttgg atactgttcc aaattgttga ttgcatgtgg
                                                                    840
ttaatgttgc attagagcac tttgcaattg cataattcat taatgttttg tgagcttgca
                                                                    900
tttgtgagtt attggatgat cagactgaat tttgtcaagt atcacattgt acatcttgcc
                                                                    960
tagatgtega tgactgcaag taataataca gtttataatg aaactateta caattettgt
                                                                   1020
                                                                   1080
tttagcacat ctgttatccg taaaacacct gtaactagct tttttaattt attatttgaa
ttttaggata gegaateaet aatttttagt tgetgaggtt ggeattttag tgattattaa
                                                                   1140
qcacttctqt caqtctttqa aaaaagaacg tattttttgt gctttgaaga tctctgaaga
                                                                   1200
                                                                   1260
atttctttta taatagaatg ggcatgtatt gtaacagttt tatgtcaaat gatctgtgct
                                                                   1320
qtaqaaaaac attaaccctt qttcaaaaaa qaaatqqata aacttgqcct ttctaagtgg
taagaatgac ctgtcactat aatatactgt atgtttacat tttatttaaa tttaatctct
                                                                   1380
                                                                   1440
tatgtatagg gtgataacct tccccagaaa caacagtgat tgcgattgtt ttctagaaac
                                                                   1500
ttctttaaag tgccacattt ggcagtacaa atgagtctga gtgtaatagc ccagagattt
atatatagtt gaatggttaa aatggtaaaa tgtgccactg tgtcaagtta cagtggctta
                                                                   1560
tgtttttcat agtaattcaa atgaacttcc tatttttgat agtaaatgtc atttaatagt
                                                                   1620
atacttgcca tttgagcctc actgcaaaat tagtgcagag gagaaaacaa tttttaatgt
                                                                   1680
aatcttgatt ttacctcata tactgtacat tccaaaaact ctaaactttt taaagattat
                                                                   1740
                                                                   1800
agatacacta ccaaacatat caccttaaaa ttgtataagg ctgaatgaac ttcatacaaa
                                                                   1860
tgaaaaaaat ctcataaaaa tacataaact atgtagcaaa agtatctgta aaatccatgg
                                                                   1902
<210> 1073
<211> 2054
<212> DNA
<213> Homo sapiens
```

```
<221> SITE
<222> (428)
<223> n equals a,t,g, or c
<400> 1073
                                                                    60
aattcggcac gagtagaaac gaaatttatt ttaaagcagt agatggtggt ggtcaaaata
                                                                   120
gtaatgaata gtgatcagca cccaagattt tcaaaattat gtcaaacaca gtgtccaagc
agtaatatgg gatttaaaaa aatacattta tgggggatga aatgagcata aggacttggt
                                                                   180
                                                                   240
catccacaca taactactcc actgagtaag aagttccgtc tctcccacgg ctggtttgtc
                                                                   300
cccacttccg gacctgtctt ctttctctgt tgcagttggc aaggtggaag gtttaaggag
                                                                   360
gaaagactta cacaatattg ttgtcatgca acagagcccg tgcatgtaaa tgtattatgt
                                                                   420
gcagaaaaca aacccgcttg tgattgcgat ggggactgtt tccataaact ttttttttt
                                                                   480
ttacaagnaa aggaaagtct attgaatttt aaagagccag aaaactgccg gatgtgctga
cagctagagg tgtcttgggt acaaaacacg ccaaatgagc cttccctgca ttcactctaa
                                                                   540
tatccttcat ccaaaagcag gtctttcttc ttaaagttca gttttcatta tgacatagag
                                                                   600
                                                                   660
atgcatcttg gtaacaaaca gttagcgtac gtaatcttat taatcttact gtgtccgtca
                                                                   720
gttgcatttt taaaatagtg gtaggcgtat ctgcaaacgt acacccaacg tctctgagaa
                                                                   780
ggatatgggc tcatccagtc ttcatcacga gatccacata catctcttca tctgagtact
                                                                   840
atcacacaga aaagactgac ggcttgtgac aattgtacaa cattgctctt tacccgtaca
                                                                   900
tagctaagca atgttgatat ccatgttagt aaggactcaa cattcatttt caggtgtcgt
                                                                   960
ttcacttttg attcattttc tctctgtgtt tatttattta tttatttara rtcytgrtct
                                                                   1020
gttcattcat tcacttttta aaactaaatt ataagaaaaa agtgtatata tcggaaatga
                                                                   1080
gaaatataar ataaatatca ttactactga gaaattgtac tgkaattgag ragggagaag
                                                                   1140
tkgttkgttt ccctttgatc tyccccagsa cttagcaaaa agccttttac agaaaaakga
                                                                   1200
agataaacat taataaacag gttgatcagt taaatggttt aatgaaacaa attagtacat
                                                                   1260
ctatggaact ctttttccat ccgtgtttgc taaatcagag gaatgactaa ttacagagtg
ctcaggctaa ttaagagggg actggtaatg tcctaggaga actacagata aggttaaaat
                                                                   1320
                                                                   1380
catgtccaac ataaacttct gttcccttcc tataagcaaa gagattaaat gtgtttgggt
                                                                   1440
tctcaaaaat cccaggctca catctttaca tttctgtgga caaccaaaaa gggaagcaat
                                                                   1500
caagggtaat agatactgtg taaactgggt taaaaaaatcc gtacagtgcc agggatgtaa
                                                                   1560
taaagatggt ctttcattct gtgaaaatat aatgaacttc ctcaaggcaa attacataat
atcatagaac tcaatgtttc tgctactatc gggtaaggtg accatacaca gtcgggagsc
                                                                   1620
                                                                   1680
tgtggctgca tgcgaggtgt atgcttcgtt cctcagggtt attgctgctt ccctcatctc
                                                                   1740
agctgagcag aaatattacc tagctaaaaa agacactctg ggctcaaaca gatgtgaaaa
1800
acacataaac caagcagtca acatttttt ttttttggtg tgtttattca agtaagcaaa
                                                                   1860
                                                                   1920
gcctttttcg tatgagaaat gagaaatgag aaatgtgcct gcttctcatg actgatagaa
acaattccgc atgtagtcat aagagcccca gttcaaggac gtgcctattt tagtacaggc
                                                                   1980
2040
                                                                   2054
aaaaaaaact cgag
<210> 1074
<211> 1003
<212> DNA
<213> Homo sapiens
<400> 1074
                                                                     60
ggcacgaggg catgttattt tcatcgcaaa gttactgtaa gctgggagaa gtggcacaca
cttgtactcc cagctactca ggaagcttaa ggtgagaaga ttgcttgagc ccaggagttt
                                                                    120
tgagaccaac ctgggcaaca cagcaagacc ccagctcaaa caaagaaaaa aagttattga
                                                                    180
attttttatt tctatggatc attttttgta gtttcttatt cctttcaccc ttcattccca
                                                                    240
cttttgatcc catcttttat ttatttagtt ttattaaatg tatatttgtc tgataattct
                                                                    300
gctatctaca gttttttgtg gacctgactc agcatttctt tgtttcttcg gattcagact
                                                                    360
gttggtggct tgtgatttta gtgatttttg gccgtgaaca tgtttcttgg acttttgtct
                                                                    420
                                                                    480
gtgggaatte tetgtgtaet etgtataaat taagttaett eaggtgtttt geattteett
                                                                    540
ttgccatgca cctggggcct gggtcactac ccttctggta ccacttaaaa ctgaattttt
                                                                    600
gtcttgggtg ctcgtactga tcctgtatga gtacaggttt atacttactg tagaaatatg
gtgtttgatt atggggtatt gtcccagatg gtgctggagt attaatatgc tctctgttaa
                                                                    660
acttaatgtg ttgtccctgt aaaactccaa aattctgaat tccagaatac tactggcccc
                                                                    720
aaatgtttaa gataagggca ctgcctgtat ttgtttctgc ctcccactat tttccttagt
                                                                    780
                                                                    840
ttaacacaaa ctcaccittt taaaaaacat tttgagagaa ttcagtattg ggaagagttt
```

| ctaacctgtt | tctggaaatg | gaagtccaaa | gtctgtttct | gtaattgttt | tttttttgag | 900 |
|----------------------|--------------------------|------------|------------|------------|------------|--------------|
| atggagtctc | actctgtcac | ccaggctgga | gtgcaatgac | gtactctcag | ctcactgaac | 960 |
| ccgggaggca | gaggactgca | tctcaaaaaa | aaaaaaaaa | aaa | | 1003 |
| 040 4055 | | | | | | |
| <210> 1075 | | | | | | |
| <211> 1832 | | | | | | |
| <212> DNA <213> Homo | aoniona | | | | | |
| <213> HOMO | saprens | | | | | |
| <400> 1075 | | | | | | |
| | acatattcaa | ctgaagcttt | ccaataatct | ttatatcaag | aaagcatgcg | 60 |
| | tacattgttt | | | _ | | 120 |
| | acccaagtgt | | - | | - | 180 |
| | caaaactgaa | | | | | 240 |
| | gtagaaggtc | | | | | 300 |
| attacggatt | caaagactta | ttttgaaagt | tggaaggaga | agggagggaa | gagagcagag | 360 |
| ggagaggtgt | agtcaagctc | ttgaatataa | ctggtggtat | tgtgggcaga | gatctttagt | 420 |
| | gtattttta | | | - | | 480 |
| | gccaatctga | | | | | 540 |
| | tattgccata | | | | | 600 |
| | ttttaatctc | | | | | 660 |
| | caatcacggc cctaagtacc | | | | | 720 780 |
| | taaaacaggg | | | | | 840 |
| | gcccacctca | | | | | 900 |
| | aaacagtttt | | | | | 960 |
| | cctcagaata | | | | | 1020 |
| | cagacttttg | | | | | 1080 |
| tatcagtaag | aaacagacct | agtttaaaag | gaataatcaa | caattttata | aaggagatgg | 1140 |
| cttattcaac | catagcccct | ccaacatatc | tactggaaat | tctgctggtt | aactttatct | 1200 |
| | taatttagac | | | | | 1260 |
| | atttacatcc | | | | | 1320 |
| | acaggacaca | | _ | | | 1380 |
| | cttaataata | | | | | 1440 |
| | tcaacaacaa | _ | _ | | | 1500 |
| | ccatagaatg tatgcttgaa | | | | | 1560 1620 |
| | atggcattca | | | | - | 1680 |
| | aattctattg | | | | | 1740 |
| | tggagctatt | | | | | 1800 |
| | ataaaaaaaa | | | | | 1832 |
| | | | | | | |
| <210> 1076 | | | | | | |
| <211> 2352 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1076 | | | | | | |
| | aacagtacac | ttgatctcca | atacagagat | atootoosso | adaaddctcc | 60 |
| | cagactctta | | | | | 120 |
| | agtgtactac | | | | | 180 |
| | attacttggg | | | | | 240 |
| | cttactgctc | | | | | 300 |
| | aagctcgcag | | | | - | 360 |
| caagagtatg | ttcccttaat | gaacactttg | gaaatgtctt | gacaccctgt | actgttttgc | 420 |
| ctgtgaaatt | gtattctgat | gccaggaatg | ttctatcagg | cataattgat | tctcatgaaa | 480 |
| | atttaaaggt | _ | - | | - | 540 |
| | gcctggcatg | | | | | 600 |
| _ | gcctgctttg | _ | | - | - | 660 |
| | agaaactttt | | | | | 720 780 |
| Clattadada | agtaatagaa | gaaaaacatC | ayıtyadaya | cctgccaggt | acaaattigt | 780 |

```
ttattccagg atcagtagaa tcacagaggg ttggtgatca ttctacaggc actgttcctg
                                                                     840
aaaacgatct ttacaaagca gttctattag gataccctgc tgttgacaaa ggaaaacaag
                                                                     900
aggacatgcc atatattcct ctcatggagt tcagttgttc acattctcac ttagtatgct
                                                                     960
tacccgcaga gtggaggact agctgtatgc ccagttccaa aatgaaggag atgagctcgt
                                                                    1020
tatttccaga agactggtac caatttgttc taaggcagtt ggaatgttat cattcagaag
                                                                    1080
agaaggcctc aaatgtactg gaagaaattg ccaaggacaa agttttaaaa gacttttatg
                                                                    1140
ttcatacagt aatgacttgt tattttagtt tatttggaat agacaatatg gctcctagtc
                                                                    1200
ctggtcatat attgagagtt tacggtggtg ttttgccttg gtctgttgct ttggactggc
                                                                    1260
tcacagaaaa gccagaactg tttcaactag cactgaaagc attcaggtat actctgaaac
                                                                    1320
taatgattga taaagcaagt ttaggtccaa tagaagactt tagagaactg attaagtacc
                                                                    1380
ttgaagaata tgaacgtgac tggtacattg gtttggtatc tgatgaaaag tggaaggaag
                                                                    1440
caattttaca agaaaagcca tacttgtttt ctctggggta tgattctaat atgggaattt
                                                                    1500
acactgggag agtgcttagc cttcaagaat tattgatcca agtgggaaag ttaaatcctg
                                                                    1560
aagctgttag aggtcagtgg gccaatcttt catgggaatt actttatgcc acaaacgatg
                                                                    1620
atgaagaacg ttatagtata caagctcatc cactactttt aagaaatctt acggtacaag
                                                                    1680
cagcagaacc tcccctggga tatccgattt attcttcaaa acctctccac atacatttgt
                                                                    1740
attagagete attitgactg taatgtcate aaatgcaatg titttattit ticatectaa
                                                                    1800
aaaagtaact gtgattcttg taacttgagg acttctccac acccccattc agatgcctga
                                                                    1860
gaacagctaa gctccgtaaa gttggttctc ttagccatct taatggttct aaaaaacagc
                                                                    1920
aaaaacatct ttatgtctaa gataaaagaa ctatttggcc aatatttgtg ccctctggac
                                                                    1980
tttagtaggc tttggtaaat gtgagaaaac ttttgtagaa ttatcatata atgaattttg
                                                                    2040
taatgctttc ttaaatgtgt tataggtgaa ttgccataca aagttaacag ctatgtaatt
                                                                    2100
tttacatact taagagataa acatatccag tgttctaagt agtgataatg gatcctgttg
                                                                    2160
aaggttaaca taatgtgtat atatttgttt gaaatataat ttatagtatt ttcaaatgtg
                                                                    2220
ctgatttatt ttgacatcta atatctgaat gtttttgtat caagtagttt gttttcatag
                                                                    2280
2340
aaaaaaaaaa aa
                                                                    2352
<210> 1077
<211> 1050
<212> DNA
<213> Homo sapiens
<400> 1077
ggcacgagtt tacaggcagg gatataagca taaattttca tgtcaattct aaagtcaatg
                                                                      60
ggatgagttc ctaactagag tcagaaaact ctgttaaata ataacacttc tttgcatttq
                                                                     120
gaggatgett attttecaaa teattteaca geaattgeet tatttgette ttgeaataae
                                                                     180
cacaggaagt caggagagca gatattttta ttcctgttgg acaaatgaaa aaaaatgaag
                                                                     240
catggaagag ttaattgaat cacctaagat tccacacacg taagkggmca gagttctaga
                                                                     300
ttagaaactc tettetgatt eteetatget aggtgtaaaa gagtagteaa gagtggttat
                                                                     360
aggtacaget taagacagae etgtaetgaa atecaettga gteeggetae aaettgteea
                                                                     420
ggtggatett gagtattttt agtagagaeg ggggggttee teaegttgge egggetggte
                                                                     480
ttgaacteet ageeteaggt gateeteeet eeteagtete eeaaagtatt gagattacag
                                                                     540
gcatgaggca ccacatgtgg ccaatagctg tactttccaa aaatgtccaa gtcaagaaaq
                                                                     600
acaaagtaag gctggagaac tgttccagat tagactaaaa acacatgatc ctgaattgaa
                                                                     660
aaaatatgat cctgaattga aaattatctt gagaactgaa atgggttaaa tgaatactat
                                                                     720
ttagacaatt gccaaaattt gattatggac tatattcgtt tcctacggct gctatggtga
                                                                     780
attaccacaa atttggtggc ttaaaataac acacatttat tttcttatcg ctctgaaggt
                                                                     840
caggaggatg aagccagttt cactgggctg aaatcaagat gttaacaggg ttgaactccc
                                                                     900
tgtggactgg taaagcacac attatctcca gtttactctt ttttttttga tacggagttt
                                                                     960
cgctcttgtt gcctaggctg gagtgagctg agatcgctcc accgcactcc agtctgggtg
                                                                    1020
actitgcctc aaaaaaaaaa aaaaaaaaaa
                                                                    1050
<210> 1078
<211> 746
<212> DNA
<213> Homo sapiens
<400> 1078
gggaatgctg accaaaactt gatttcatca gcttcatgaa aaggactagt gtcattaacc
                                                                     60
tgttgaacag aattggttta ttaaaaaaat catttccagt agtgtgaaac ctttacgagt
                                                                     120
```

| ctttaacatc | taaatgttat | gactccttgt | accttaaqtt | ttccagtctt | tcttatttat | 180 |
|-------------------------|--------------------------|------------|------------|------------|------------|--------------|
| | agtacctctg | - | _ | - | | 240 |
| | ttgttaaagt | | | | | 300 |
| | aggtgtgttt | | | | | 360 |
| | aagtggcaac | | | | | 420 |
| | taattcttca | | | | | 480 |
| | tattcttaac | | | | | 540 |
| | tttggcttaa | | | | | 600 |
| | atctgaactt | | | _ | | 660 |
| | tgtcttaagg | | | | _ | 720 |
| | aaaaaaaaaa | | acagetaagt | tactigatia | aaacaacyac | 746 |
| aaaaccgcaa | aaaaaaaaaa | aaaaaa | | | | 740 |
| <210> 1079 | | | | | | |
| <211> 2608 | | | | | | |
| <211> 2000 <212> DNA | | | | | | |
| <213> Homo | canione | | | | | |
| \215> 110MO | adrena | | | | | |
| <400> 1079 | | | | | | |
| | gcaggatttt | atgagtactg | ttcattcaca | gatgagaatg | aagattagat | 60 |
| | ataaaccaac | | | | | 120 |
| | cctgtgcccg | • | | | - | 180 |
| | actcacaaaa | | | | | 240 |
| | | | | | | |
| | acatatattt cacaaagaca | | | | | 300 |
| - | tgaccctctc | - | | | • | 360 420 |
| | | | | _ | | 420 |
| | cattgtgaaa ataaaatgga | | | | | |
| | | | | | | 540 |
| | agagaaacta | | | | | 600 |
| | ttttttctag | | | | | 660 |
| | atctagtcct | | | | | 720 |
| | aaaccagtta | | | | | 780 |
| | ttctcactga | | | | | 840 |
| | tggactaatt | | | | | 900 |
| | cttaatattc | | | | | 960 |
| | actacaaaaa | | | | | 1020 |
| | caggaggcac | | | | | 1080 |
| | gatgaagggc | | | | | 1140 |
| | ttagtcatct | | | | | 1200 |
| | tgcattccga | | | | | 1260 |
| | acttgcactc | | | | | 1320 |
| | agactcactg | | | | | 1380 |
| | ctttttttt tcattttgtg | | | | | 1440 |
| | cagaaatata | | | | | 1500 1560 |
| | cacacctgtc | | | | | 1620 |
| | gcttctattt | | | | | 1680 |
| | ggaaatgtcc | | | | | 1740 |
| | ggctctgcct | | | | | 1800 |
| | gcgactccac | | | | | 1860 |
| | cacctctgcc | | | | | 1920 |
| | | | | | | 1980 |
| | ggggctgcag cggggtaaga | | | | | 2040 |
| | gccccttcag | | | | | |
| | aaacctgtgg | | | | | 2100 2160 |
| | cactttgtct | | | | | 2220 |
| | gcctcatcac | | | | | 2220 |
| | | | | | | 2280 |
| | atacccgcct ggtggtgatt | | | | | |
| | actgaaaaaa | | | | | 2400 2460 |
| | gattgcttga | | | | | 2460 2520 |
| | acctgggtga | | | | | 2520 2580 |
| Juguacica | gggcga | | Josephan | | uuutaatata | 200 |

```
aggaccttaa aaaaaaaaa aaaaaaaa
                                                                    2608
<210> 1080
<211> 1067
<212> DNA
<213> Homo sapiens
<400> 1080
ggcacgagaa ataaataaat aaaataataa taatgataat atgatagcag ctattatttt
                                                                      60
atcgagggct ctgccaagtg ctttatatgc gctaggctct ataatcttca caacaacctt
                                                                     120
taagaaagac tctgttacca tcttcaattt acagatgcag aaacgaagca caaagatgtc
                                                                     180
atcaaagtgt ctgaaggtca cagggccagt aaggccatgg gaaatgtgca tgttaatctg
                                                                     240
300
acagagtagg tagagactgg tctcaggctg cctgaaggct gacacagacc cagccctgac
                                                                     360
cctctcacaa cgtcacactg catttgcccc cagctcctct cagtctagaa acctgcaaac
                                                                     420
cccaggatcc tagtgtctaa gcacaggccc cagtgtctgt taggtcaccc cattccaggc
                                                                     480
ttggatetag ceccacece teecteacat eteccacete eteagteaaa ageaaagtea
                                                                     540
agacaggcag ccaagccagt cccagcagaa ctccttgaga aaggtgacat agcagcagca
                                                                     600
acccagcctg agaaagtgcc tgaagccaca gcagccaacc tgttcaaaca gatcacctcc
                                                                     660
tcctccacca aaaagaattt acctggaagg gtggtttcaa aacaaaagtc caggaatagg
                                                                     720
tgaaaggtct actcagggaa actaaggatg ggaaggaaaa aaccactcct gaaggaatga
                                                                     780
ggtgstcacc ctataatccc agcattttgg aaggctgagg ctggtggatc acgagtccag
                                                                     840
gagttcgaga ccagcctggt caacatagtg aaaccccatc tctacaaaac atacaaacat
                                                                     900
tagctgaatg tggtggcatg cacctgtagt cccagctact tgagaggctg aggtgggagg
                                                                     960
attgcgttta ggagatcgag gctgcagtga gccgtgattg tgccaccacc acactccaga
                                                                    1020
ctgggtgtcc agagtgaaac ctagtctcaa aaaaaaaaa aaaaaaa
                                                                    1067
<210> 1081
<211> 2466
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1348)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1449)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1457)
<223> n equals a,t,g, or c
<400> 1081
ggtgagcctc tgcacccagc cacagtggtg actattgaac aaaactgagt aatagtcaca
                                                                     60
tctcctgctc ccttgaatgc agaagcaatt gtacttcagg gcatggtgtt atctacttgc
                                                                    120
aaacttttta ttttttgatc ttacagcaac tacttttgat agtacctcac taaaaacatc
                                                                    180
agcaaggagc cgccaatata cattgaccac tctggttcta actgctttcc ccatagctag
                                                                    240
tctgcctttc aaattgttgc tggtgtcagt tttacctagt gattggtcaa aacataacaa
                                                                    300
gggtctctag tttttcatcc tgcaatatct gtttccacac tgccggttgc ctggcaacac
                                                                    360
aataccagag ccacatattt tagatttttg ttatgatggc acttttccat tcctacgtat
                                                                    420
cagtcagcta gagctgcata acaaatagca aagactgggt ggcttaaaca accaaaattt
                                                                    480
gttttttaac agttctgwkg gccaaaagtt cmaggtcaaa gtgttggcaa gtttggtttc
                                                                    540
tectgaggee teteteettg gettgeagat ggeteeette ttgetgtgte ettacactag
                                                                    600
gcacttgtgc ccctaatgtc tccctgtgtg ttccagtgtt ctcttataag gacaccagtc
                                                                    660
ttataagatt agggcccctc tctatgattt catttaacct taattatctc ctgaaaggcc
                                                                    720
ctatcttcca atatagttac attggggctt tggccttcaa cctataaatt ttgggggtct
                                                                    780
```

```
acaacttagt ccataatatt ctggtactga atttaaaact attagggtgt cggctaagcc
                                                                    840
actgtaacag agaaaccccc aaatactgta gttccaataa gataatttat tttctttctt
                                                                    900
gtagccatca ggaggtagcc catgaaattg tccagggact tatatttatt ctaccattat
                                                                    960
 ttttactcta ttattattt atattattat tatacttatt ctaccattta ttctgccatt
                                                                   1020
1080
caagcacata catttgaata aaatgagata gaagttgcac acatcaagtt tgkatattct
                                                                   1140
tttggtaaga aattaactgc agaggaacct cttgctgagc agccatgcct tctaaaacct
                                                                   1200
gggacagaga ttttattatt aaaatgagga aagggagaat gaacgggggg gaggattatc
                                                                   1260
agttccttcc tacattcctc ttctatacat cttacattyt gtattgagta tgagaagaga
                                                                   1320
cctgaaattt agatgattct ttacattntt atttatctaa aattgaagtt tacctaattt
                                                                   1380
agtttaattt aattatttta ctgatttaaa ttaatcagat tttcttaaaa ttccrgtaaa
                                                                   1440
agaaaaaanc gtaaggnaag ctttgttgct ttgcaaaata gggagatatt tcagaaggta
                                                                   1500
agggaagagg totatootac agtatggagt acagaagtgg gaottagaga tagccaagag
                                                                   1560
agtttgaaat attcaaagaa tatatccaat ataatctgta gcctttttta aaaaaaaaa
                                                                   1620
tagaatttcc atctctctga atgtattcca gttgtaaaaa aaaaatgtat tgagtttccc
                                                                   1680
atcatatgga agtttttaaa attgtaggaa ataaaatatt cagaaggcta cacaaggtat
                                                                   1740
taaaaaaggg gacagggata taatagctta ctagcttatt agaatgaatt tggttcctta
                                                                   1800
tgagggataa tctagagaaa agaggcatag aataagatct ttggaaccaa acagtctgag
                                                                   1860
tttgaatcct ggctctccct tttggcatct gtgtgatctt gggcaagcta cctaatttct
                                                                   1920
attacagctt tgttatctca actgtaaaat gaggctgata ttgatatatc attggagagg
                                                                   1980
actaaatgag accatgcaaa atgtgtactt ggcacagtgc ctgatccaca aatactgatg
                                                                   2040
atgatgatga tgatgatggt ggtggtggtg gtggtgatga tggtgataat aacagtgatg
                                                                   2100
atgatggtag tatagcatta gtgcagcaaa aaggaaaaat ggactcaaaa ctaatttttc
                                                                   2160
ctaaaaattt gtgcttttat ttatcagatg cttctaactt agtccccacc agtctaagac
                                                                   2220
tagaacaata ttgggatttt ccttttcaga agttctatca ytggcaagtt gttttattt
                                                                   2280
ccagaactcc aactcagaag aaatcacctc tgaattcatt gtctatttaa taaagtcaag
                                                                   2340
attetteaaa tteteeattt tatteagtat taaataaett teaaaatatg getatettga
                                                                   2400
aagtctccac ttcctcatac ttagcaattt ccagcattat ttaaaaaaaaa aaaaaaaaa
                                                                   2460
ctcgag
                                                                   2466
<210> 1082
<211> 2549
<212> DNA
<213> Homo sapiens
<400> 1082
ggcacgagga gctgctcccc ccagcccact cctacctcac tccatctgcg ctcacctgt
                                                                     60
tctcatcctg ccccactgtt tgacttgact cccagcacag gcgccctggc acagcaggga
                                                                    120
tcttgcagcg attccggttg cacatccaca ggggcttcta aagaatgcac tcaggacttc
                                                                    180
tggcctcatt cccaccccat ggaccttacc tcaccctttt ctccagcacc attgggccaa
                                                                    240
aatgagacct tatcaaagaa agaacaggac gcttgccttt ttcctcaggt tcttaattat
                                                                    300
gtttttagtt ttttgcgagt ctctctgaaa tcctgaagat gtggaagagt ttgactaaag
                                                                    360
tacataaata ctcagagctc ttttttttt taaacatcca ggatctcaag ggtgttcaga
                                                                    420
accttttcaa aaaaataatt tagccataga tgagaagcag ccactaggcc cttccttgta
                                                                    480
aagtggcccc tgtgtgggga tgcttcaagc caggtggaag gacggctgga ctgtgatagg
                                                                    540
agtgagaaaa gaacagatct ttttctttga gggatgtgag cccccttagt tgtcagaccc
                                                                    600
agagaggcat tgaaatgtga cagttgttac gtttcactcc ccaccctgac ctaagtaatc
                                                                    660
gcctgctctg tggactctag gccagtagcc tgtaaactct gtatattaat tttgcctcag
                                                                    720
tttctttagg tcaatacgaa caacagagcg gtggctgact acacataatg tttgggatct
                                                                   780
tacctgaaga gcttctgcaa ggaggcttcc agatgtttaa agtttggctt gagttggggt
                                                                   840
gtcctcagac cccactgaca tggagtagtc ctcattctga gaacttggta tctgttatga
                                                                   900
gacatggttt ggctgcgtga ggtggtgatt ggcttctcac catgacaagc caccttaggc
                                                                   960
1020
ggggtctcct gatcacattt tctgctttac agactgatga agagaagcag cagggcttac
                                                                  1080
ctgtggtgat gccagtgttt gacagaaata cctgcagcat ccccaaatcc caaatctctt
                                                                  1140
tcattgatta cttcatcaca gacatgtttg atgcttggga tgcctttgta gacctgcctg
                                                                  1200
atttaatgca gcatcttgac aacaacttta aatactggaa aggactggac gaaatgaagc
                                                                  1260
tgcggaacct ccgaccacct cctgaatagt gggagacacc acccagagcc ctgaagcttt
                                                                  1320
gttccttcgg tcatttggaa ttcctgaggg cagccagagc tccttggtcc tttcagtact
                                                                  1380
aggcagaaca gcccccgatc tgcatagcct gtgaaagccc acggggacat cagtaacctt
                                                                  1440
ctgcagccac catccaatgc cattactgca aagtgagact tggccactga cctgggcctg
                                                                  1500
```

| acaagtetge tetattgeaa tetttageaa agtgaettet | c tcttcagaaa g agtgcccctg a caattctctca a ctttttcaca c cttttaaaat aaaatgtttt | caaagggtat agttacgttc tcatagaagg tgagtagcag | tgatggactt agcacttaag tgcaatcgct atgaaaaatt | cctgccagtg accggctaat cacttgggaa aaaatttgaa | acagagcatg ggcaatagga cactactgag cttgattatt | 1560 1620 1680 1740 1800 1860 |
|--|---|--|---|---|---|--|
| aaatacttca cattatgcat tttactgcac aaagctgggg ctctgaaaca actctcttgt | a gagccaaagc tacttggtat tatagaaata tcgtattcta gctctagccg tggttcgcaa | caacttcaaa acagacttat ttcatgtatg agtgctaaag cctaatgcac agaaaagtta | taccgtgacc tttcataatg ttaaactttt aaggctgctt ttcacaggta ggacttaaca | aaatttacat caaattaata ctgattgagg ctactgtata actccccaag | gattcatatt aaatgacact ctaactggaa gaacccaggg gtaaaactag aaattttata | 1920 1980 2040 2100 2160 2220 |
| acaaagaaca tacggtggga ataagcataa aaactcgtat | caaaagtcta aaaattgaat atctttgatg taccataaaa ttgtggtttt aaaaaaaaaa | atttaatgaa ccagaaattt aatgacactt tttcccagat | ttgacatttt ataaagaggt gacatgtcaa | ataaccaacc tctgtatctt tgtatttgtc | tgtttttatc cacaccttga atttcatttt | 2280 2340 2400 2460 2520 2549 |
| <210> 1083 <211> 1068 <212> DNA <213> Homo <400> 1083 | sapiens | | | | | |
| aattccctct gccctattag caagcttcta taaaatgtag cacttaacta ctatgagcca agctgctctt agataaagca gagacagaga ataaagcgac tcaggaagac ccttggggac tgacaatgga gtaaagggga tccaaatcta tgtgttccaa catgaaatag | cagcagaaca gtacagaaca gtacagaat gtaaaggtct ttttttcaa aatttcctt gatgaatgtt ggaatccaca gtcaaatgaa atwacaaata cttgcaatgc ggggcagagt gtggaagcct agggaagggg aagtagtgaa cagctgtagt taaaacggta taaacatttg aattcgatat | ggctactatt ctgtttctgc atcattttcc tgttcataat agacttacta ttacaataga caaaataagt gggcttgaac aacatgtata tctcagcaca agagcatttg accatcatgc tgccttaggc acagaggcag tttatggata aattttttt | ttaattttgt actctccct cccatgatat ttgttagaac gaaacacaac aagacaaaat tttaatagta tgtgaactgg aaggagctga ggccaagaac gaagacgcaa agcacactgg ttcatgggcc ccactgacta ctaaaattga ttctttaac | ccatgcatct ccacatttct tttctctagt aaatatttac cataaataag gcatgattag cacacaggaa ggacagagga ctacaaaact taaaggcaga acaagggaga acatgggtca gtaaggtctc catcgtcaga atttcatata cattcttacc | ccatttactt atacgacttt atctctacgs tgagcatcta acagacaggt atacacagac aaaaggagct agctcttctg gggtttagaa aagagtgtag gggagcagc gcaaacttct tgccacagga tgaacatgcc atgtaaatat | 60 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1068 |
| <213> Homo | sapiens | | | | | |
| caaactgtaa tgactgccc aggcttagtc tgcagctgaa ttaaggcttc aaattaaatg ctcaatttct ggcctgaaac caatgtcctc | actgatattt agcaaaccag ttaagaggtc atgggcctca tccaagtcta ctctcttaag cacaatcttt atcagctatt ctcagtattc caaaatgtca tttctcgctg | gtgtcatgac ctctctctcc gaccttctaa tacagctagt tgggaaggtc ctgctcctca aaatttatat cctttaccac | tctgccttcc tcctgtcctc atatgctcct cctaaattgc atatcctatg tgctccacaa caaatatccc tacgcctctt | tggttttcct tcattttag ggcttcaatt acctgatttc gctcccaacc accacttccc tattatttct gtagttttct | gctacctctc tttccctcaa atcacctcta caactgtcta ccatatattc tttctaagtg ttatcacctt taataatgtc | 60 120 180 240 300 360 420 480 540 600 660 |

| gctcaattga agccatccat tccaaatcag tttaattgtc ggattctgct ccaaaatagc gaccatgcta ctcttccct catggcttta tccttaccca aattcctgac | atcactactg aatgtgccc tggttctcaa atgacttgga aaacatccta aagagtgcca tatctatacc taactatcaa aataccatcc gctgcctact tcccccaaaa | tcgttttcat attgcagcct ctctcctctc ttttgctgcc gtagggggga cagtgccagg aggccgagaa tctgctcaga tgttttattt agtggtgacg agacatctcc ctccttttcc tgggagttat | caaggctaaa cccagttatc gagggacatt gtacaaccac acagcccca tctgctccaa atatttccct atcttcaaat cctccaaaat tgagtgtact tcaaataggt | ctgttgtgac taaatttatc tggcagtatc atctagtggg acaacaagga atcaaggctc agcaacttag cccattctaa gtttatctta atttaacata atacagccc | agactctcaa tccccttcat tggagacatt tgaaggccag attagccagc tctgtccca aatgtcgtct gtctatagcc tcttctgagt tctgaacctg agcaatcacc | 720 780 840 900 960 1020 1080 1140 1200 1260 1320 1380 1440 |
|---|---|--|---|---|---|---|
| cagtgtcttg atcttaaatc <210> 1085 <211> 1392 <212> DNA <213> Homo <400> 1085 | ccacaaatca caggaattcg sapiens | atccattagc atatcaagct taagggaacg | aagttctgtc tatcgatacc | aagagtctac gtcgac | ctccagacac | 1500 1546 |
| atctccatga | ataacctaaa | tgatcccca gtggaattat | aattggaata | tccggcctaa | ttccagggcg | 120 180 |
| | | tagggagtcc | | | | 240 |
| | | ttttcaacag | | | | 300 |
| | | cgctcagttg | | | | 360 |
| | | | | | _ | 420 |
| | | ccttatctct | | | | 480 |
| | | ccaggtgatg | | | | |
| | | gcaaagggaa | | | | 540 |
| | | tctcacagaa | | | | 600 |
| | | gatagagaag | | | | 660 |
| | | ggcagccggt | | | | 720 |
| tgtggtgatg | tctggaacac | caacaaacgc | cagaatggca | gactcatgtg | gctctatctc | 780 |
| | | cgaactgaag | | | | 840 |
| gaaaagtaag | acaagagtga | aatcaaactg | cttttagtga | ctcgaggcca | ggcagtcatg | 900 |
| | | tcttccgttc | | | | 960 |
| acccttcagc | agcgacctcc | actcccgcca | ccgtctgagc | agaagtgcac | cgaagcctca | 1020 |
| gagacagagg | gtctcctccc | gatgctctgc | cgctgttggg | gatatggttt | cttgaagcat | 1080 |
| ttttaggctg | ccagtattgt | attaagcaga | acagtataac | ctcgtatttt | agctccaggg | 1140 |
| taaaaatggt | tttttaaaaa | gtcaaataca | atactggtcc | ttascacaag | taattttctg | 1200 |
| | | atactttctc | | | | 1260 |
| | | atgtgtagaa | _ | | | 1320 |
| | | attttaaaga | tctctctcac | tccataaagg | ggaaatacca | 1380 |
| agtgtttctt | gt | | | | | 1392 |
| <210> 1086 <211> 1250 <212> DNA <213> Homo | sapiens | | · | | | |
| <400> 1086 | | | | | | |
| | atctcagctc | actgcaagct | ccgcctccca | ggttcacqcc | attctcctqc | 60 |
| | | ggagccagcg | | | | 120 |
| | | gagtgtggac | | | | 180 |
| | | gcttgaacat | | | | 240 |
| | | caggagagca | | | | 300 |
| | | tgaaggagca | | | | 360 |
| | | gtttctgttt | | | | 420 |
| | | aactgaaaaa | | | | 480 |
| | | | | | | |

| tttttttgct | gtgtttacag | cttqttaatq | ctctactqtc | tttgtttcaa | gagagatttg | 540 |
|-------------------------|--------------------------|------------|------------|------------|------------|--------------|
| | agctcgtttt | - | | | | 600 |
| | tgtttgattt | | | | | 660 |
| | acatcaaatt | | | | | 720 |
| - | taattgatcc | | | | | 780 |
| | ttttccacat | | | | | 840 |
| | taatgtttca | | | | | 900 |
| | tgtagtttct | | | | | 960 |
| | taatgggaca | | | | | 1020 |
| | agtattggag | | | | | 1080 |
| | ttttaaattt | | | | | 1140 |
| agttcttcat | ccagtaggtg | tttaacagtg | ttattttgcc | actggtaatg | tgtaaactgt | 1200 |
| gagtgattta | caataaatga | ttatgaattc | aaaaaaaaa | aaaaaaaaa | | 1250 |
| | | | | | | |
| <210> 1087 | | | | | | |
| <211> 2107 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1087 | | | | | | |
| | gttccaactt | tgactccatc | tatatctgcc | ccagtacctt | cgcctgtgca | 60 |
| | ctggcgctgc | | | | | 120 |
| | ctgtggtgcg | | | | | 180 |
| | tcaactctgt | | | | | 240 |
| | tcctgattgt | | | | | 300 |
| | accccagttt | | | | | 360 |
| | ccgcttgggg | | | | | 420 |
| cctgctgatg | ggccttgcca | gtggccgcat | tatccttatc | ctagagggtg | gctataacct | 480 |
| | tcagaatcca | | | | | 540 |
| | tgccacggcc | | | | | 600 |
| | cagatactgg | | | | | 660 |
| | taagttggtc | | | | | 720 |
| | cacacgagaa | | | | | 780 |
| | gaagagtcca | | | | | 840 |
| | cagccctcag | | | | | 900 |
| | gtcgggggag | | | | | 960 |
| | gaccagacca | | | | | 1020 |
| | gaggctgtag | | | | | 1080 1140 |
| | acactggacc | | | | | 1200 |
| | ctagcctcga | | | | | 1260 |
| | cagatatete | | | | | 1320 |
| | cagggggcct aggtcaggac | | | | | 1380 |
| | catattttat | | | | | 1440 |
| | acctgcagca | | | | | 1500 |
| | ttgggtgtgt | | | | | 1560 |
| | ccaacaccat | | | | | 1620 |
| | gtgttactac | | | | | 1680 |
| | ccaccagaac | | | | | 1740 |
| | ctcttcacct | | | | | 1800 |
| | atgaggggta | | | | | 1860 |
| cccaagagtg | cttatttaag | tgttaatact | tttaagagaa | ctgcgacgat | taattgtgga | 1920 |
| tctcccctg | cccattgcct | gcttgagggg | caccactact | ccagcccaga | aggaaagggg | 1980 |
| | tggccccaag | | | | | 2040 |
| gttaactggc | aggcatggca | aggttgcata | tgtaataaag | tacaagctgt | taaaaaaaaa | 2100 |
| aaaaaaa | | | | | | 2107 |
| <210> 1088 | | | | | | |
| <211> 1088 | | | | | | |
| <211> 11/4 <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |

| <400> 1088 | | | | | | |
|--------------|------------|------------|------------|--------------|------------|------|
| | ccagtgacga | tacagaggtg | tcttatgatt | tcatttacat | tttcctaatt | 60 |
| | tggttattgc | | | | | 120 |
| | tatctcttcg | | | | | 180 |
| | tctcaggaac | | | | | 240 |
| | gctttctctg | | | | | 300 |
| | attttgagta | | | | | 360 |
| | tgttgtgttg | | | | | 420 |
| | ttagagaagt | | | | | 480 |
| | ttttggaact | | | | | 540 |
| | ggtttgggtg | | | | | 600 |
| | actgcagggc | | | | | 660 |
| | gtcggagaag | | | | | 720 |
| | tgaggccaca | | | | | 780 |
| | agtttcaata | | | | | 840 |
| | tctggctttt | | | | | 900 |
| | cccagataat | | | | | 960 |
| | aaagtcctat | | | | | 1020 |
| | tggtcttgca | | | | | 1080 |
| | tctgttcatt | | | | | 1140 |
| - | attaaaaaaa | | · · | acycacaaa | caaaacccgc | 1174 |
| cacccaacc | accaaaaaaa | aaaaaaaaa | aaaa | | | |
| <210> 1089 | | | | | | |
| <211> 2029 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | saniens | | | | | |
| (ZIS) HOMO | Bapiens | | | | | |
| <400> 1089 | | | | | | |
| | catggagaca | gaatggcttt | cttcaaagtc | agttaccatt | ttctgattgc | 60 |
| | tacaattgga | | | | | 120 |
| | gagacaacag | | | | | 180 |
| | gagaaacaga | | | | | 240 |
| | ttagggtttt | | | | | 300 |
| | aaacatccag | | | | | 360 |
| | cagattttca | | | | | 420 |
| - | ttgtgttatt | | | | | 480 |
| | tttcaaaagg | | | - | | 540 |
| | gacaatatta | _ | | | | 600 |
| | atgcactgac | | | | | 660 |
| | tatactgctt | | | | | 720 |
| | aactacaata | | | | | 780 |
| | gaaggaaatt | | | | | 840 |
| | agaaattgaa | | | | | 900 |
| | tgttaattat | | | | | 960 |
| | ggacagtgcc | | | | | 1020 |
| | ttaaatacca | | | | | 1080 |
| | gagaaactca | | | | | 1140 |
| | tttgaatatg | - | | | | 1200 |
| | taaatttcct | | | | | 1260 |
| - | ctctcctatg | · · | | | | 1320 |
| | tgaagcatca | _ | | | | 1380 |
| | aaaaaaaag | | | | | 1440 |
| | tcacatgaag | | | | | 1500 |
| | cctaagagtc | | | | | 1560 |
| | tctttttct | | | | | 1620 |
| | aaagaagatg | | | | | 1680 |
| | tcttttcccc | | | | | 1740 |
| | agcacacaac | | | | | 1800 |
| | cataaaagat | | | | | 1860 |
| | ttgttttggt | | | - | - | 1920 |
| | | · · · | - | | | |

| | gaggagggaa | | | | ctatcagaat | 1980 |
|--------------------------|--------------------------|------------|------------|------------|------------|------------|
| gacacagcgg | aattcgatat | caagcttatc | gataccrtcg | acctcgaag | | 2029 |
| <210> 1090 | | | | | | |
| <211> 1030 <211> 1035 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | _ | | | | | |
| <400> 1090 | | | | | | |
| | gagctatatt | | | | | 60 |
| | tcaatagtaa | | | | | 120 |
| | acagcagaat acgtgtgaaa | | | | | 180 240 |
| | gcacgtgctg | | | | | 300 |
| | attttctcat | | | | | 360 |
| | acacgcaggg | | | | | 420 |
| cacacttcca | tactaactgc | cctgcgggga | tatttaatga | gctcttaaat | ggcagaaatg | 480 |
| | tcctgttccc | | | | | 540 |
| | ctagttcagg | | | | | 600 |
| _ | caaattggat | | | | | 660 720 |
| | aagggtgagg ttttgttttt | | | | | 720 780 |
| | actttgggag | | | | | 840 |
| | aacatggtga | | | | | 900 |
| | actcgggagg | | | | | 960 |
| cgcgccactg | cactccactc | tggtcgacag | agctagattc | catctcaaaa | aaaaaaaaa | 1020 |
| aaaaaaaac | tcgag | | | | | 1035 |
| .010. 1001 | | | | | | |
| <210> 1091 <211> 458 | | | | | | |
| <211> 438 <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1091 | | | | | | |
| | cctgtagatc | - | | | | 60 |
| | ctgcagagag | | | | | 120 |
| | gctctcaaaa | _ | | | | 180 240 |
| | agaattatag aatttcactt | | | | | 300 |
| | taaaacaatt | | | | | 360 |
| | caagtttctg | | | | | 420 |
| aaatgccatc | tgccatagct | tccttgagtg | cagggatt | | | 458 |
| 040 4000 | | | | | | |
| <210> 1092 <211> 1610 | | | | | | |
| <211> 1010 <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1092 | | | | | | |
| | cggcacgagg | | | | | 60 |
| | tctatgggac | | | | | 120 |
| | atttataatg ttttattatt | | | | | 180 240 |
| | atacgtatac | | | | | 300 |
| | tatatctcct | | | | | 360 |
| ccgatgtgtg | atgttccccc | gcttcctgtg | tccatgtgtt | ctcattgttc | aattcccacc | 420 |
| | aacatgcggt | | | | | 480 |
| | ttcatccatg | | | | | 540 |
| | atggtgtata | | | | | 600 |
| | aaaatggatt ttaaccaaat | | | | | 660 720 |
| cactyctyay | ccaaccaaac | gagaagagaa | addiction | aacycayctt | gecaetigee | 120 |

```
780
tgacttgatg cagactgctt tgcttagtaa tcatgcagca ctatcaagac tgtgtacata
atgtcaggat ccatctacat aagatgtagt atggactgat gccaagtgag cctggggtgg
                                                                   840
aaatcagaac tggatgcaaa tcctgatgtt atccgagaac aggcacctgt tacataggct
                                                                   900
                                                                   960
gtgttactgt ggcaaaggta atggtaaaac acagactggc cagaagcatt gtgtacaatg
                                                                  1020
agaccttgca actttgtgta tattagtatg tggggggatg tgaattatta aagacattta
                                                                  1080
aaactgactg aatcagcaac ctctaatcta taaaaaaaaa ttccagacgt ccagccgggc
                                                                  1140
acgttctcgt gcctataatc ttagtgcttt gggaagctga ggcaggagga tcacttgagg
                                                                  1200
ccaggagttt gagaccagct tgggcaacat agtgagaccc ctgtctctac aataaaagta
aacaacttag ctgggcataa tggcatgtgc ctgtagtccc agctactcaa gaggtggaga
                                                                  1260
                                                                  1320
tgggaggatc acttgagccc aggagtttga ggctgcagtc agccgtgact gcaccaccat
                                                                  1380
1440
cttcctataa ttcctaaaaa taaatgtggg tttgagaggc ctaccttgaa atgtacaaga
                                                                  1500
tcctggccag acttcaccta tctaacaata tgctagtaac tatttgttga catgtcttaa
                                                                  1560
agaaatgttc atcagggcct cagaaagcaa ggcagagaac aggtccctga aatttactag
                                                                  1610
cttgcaccaa accatcagat aaagataggt taatatttga cagaaaaaac
<210> 1093
<211> 1085
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (506)
<223> n equals a,t,g, or c
<400> 1093
gatgggtgcc ccaaatgctt ggtccaccat catcgtgcct ggcatgaagg atgctgtgat
                                                                    60
ccacgcactt cagacctccc aggacaccgt gcaatgtcgg aaggccagct ttgagctcta
                                                                   120
tggcgctgac ttcgtgttcg gggaggactt ccagccctgg ctgattgaga tcaacgccag
                                                                   180
cccacgatg gcaccctcca cagcagtcac tgcccggctc tgtgctggcg tgcaagctga
                                                                   240
caccetgege gtggtcattg accggagget ggacegcaac tgtgacacag gageetttga
                                                                   300
gctcatctat aagcagcctg ctgtggaggt gcctcaatat gtgggcatcc ggctcctggt
                                                                   360
agagggette accateaaga ageceatgge gatgtgteat eggeggatgg gggteegeee
                                                                   420
                                                                   480
agcagtccct ctgctgaccc agcgaggctc tggggaagcc gaggatcagg aagtttaagg
                                                                   540
aagttgccca aggttgcaca gctcanaagg gcacagctgg gatgcagacc cagcccgtca
                                                                   600
ccacttcccc agcctccaca ccaaggccca gctgccttct ccccatgtac tccgacacca
                                                                   660
agggccaggt cctcagacga cagcacagca agctggtggg cactaaggcc ctgtcgacca
                                                                   720
caggcaaggc cttgaggact ctacccacgg ctaaggtctt catttccctc ccaccgaacc
                                                                   780
ttgatttcaa ggtggcaccc agcatcctga agccaagaaa ggctcctgct ctcctgtgcc
                                                                   840
tccgaggccc ccagctggaa gtgccttgtt gcctctgccc tttgaagtcg gaacaattcc
                                                                   900
tagcacctgt cggaaggtca aggccaaagg caaattcaag gccagactgt gacaaaccca
                                                                   960
gggctgaggc ctgccccatg aagaggctga gccccctgaa acccctgccc cttgttggta
                                                                  1020
cattccagag gcgcaggggc ctgggggata tgaagctagg gaagcccctg cttcgattcc
                                                                  1080
1085
aaaaa
<210> 1094
<211> 910
<212> DNA
<213> Homo sapiens
<400> 1094
ggcacgagag catgtgtgtc aaggaccttg ctgggtcaac aattcatttg cctttgtctg
                                                                    60
gagtctgcca gcagcagtag ctaatgtcta aaagacaaca ggggccagga gagaaaaggg
                                                                   120
                                                                   180
aggaaagaac taagtctctc ctagtctatg gcatgctatc atggggtcaa gtaggggcag
                                                                   240
ggaggettea tggggeetae etttgggatg acattacece agtgggeatt gtttgggtgg
                                                                   300
ttttctttta aactatttac actgatatga cagactcaaa ctcatatttg ctattctccg
agcacatgga aaggtaactc actctgtaca ttcagatatc aaactatgca ctgtgagggc
                                                                   360
tacgagaagc gcaaacagta aacgettggc aggagggaac acttectete tetgaggaag
                                                                   420
                                                                   480
aggctggaag ctggtcttcc ccctccaaga atacacgggt gcactgagtc tttatgcaaa
```

```
ggcaacactg agccatggcc aagggcatct ctgcggggac cctgggaaag gagcctgctt
                                                                  540
ccaggtgttc cccaaagaga tggaaaacaa gacagtcatt tggaacagtg atgcataata
                                                                  600
aaatgtatgt ggccacctta caatactgct aagttgctaa aatatataaa gttaatattt
                                                                  660
gagttctatt tttataaaat agttctagat ttatggcaat ataaacgtgt atagcctttt
                                                                  720
gattttaatt tctagttttg tgctttgaag aaatatatgt aagattaaag aactgtatat
                                                                  780
tgtaagcatt atattcaaat tatttaaaaa ttgttctaag tctatattca ataaaaagta
                                                                  840
                                                                  900
aaaaaaaaa
                                                                  910
<210> 1095
<211> 1654
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (450)
<223> n equals a,t,g, or c
<400> 1095
cccccgggct gcaggaattc ggcacgagcc tctttgaagt ttctagatgc accacttcct
                                                                   60
gctcacagcc tggaattcgg ttaacaagtc agtgtcaacc tacctttccc ttcatgattt
                                                                  120
atagactttt gggagtacct tctggtagct tttgtcttcc cataggaaag aggcccaatc
                                                                  180
ccagtttgtc ctcacaaagc ggccagctcc gtgatatctc ttttgcgggc agagttaaga
                                                                  240
ttgtacacag atccccacaa gtaccacgat ttttgcctca ggaaggataa agcacatgtt
                                                                  300
tgtttctgct ttcgttttct tttttctttt tttcacgaag ccttatggag aagtatgttt
                                                                  360
ctgctttctt tcctgaggaa gcctagcttc tgggccacgg gactgatcct gtctacatcc
                                                                  420
tettteeete catteteeat egtgtetetn ceeeegtete acceaecee gtgeeeetet
                                                                  480
ctgcctcagc ttcccctctt cccctgcagt gagtttcctg cgcagcggca ctaagctcat
                                                                  540
cttccgccgg aggcctaggc agaaggaagc tggcctgagc caatcacacq atqacctctc
                                                                  600
caacgcaacg gccacgccca gtgtccgaaa gaaggccggc agcttttctc gccgccttat
                                                                  660
caagegettt teetteaaat eeaaaceeaa ggeeaatggt aaceeeagee eeeagetetg
                                                                  720
aggacccagc totgaaaggg cacgagttot otcageccat tecccaecte cecttecata
                                                                  780
ccccttcctg gatctccagt gcctgggcca ggaaagccct ctgggttccg ggaagccccg
                                                                  840
tccaccctgg gccatggggc cggttggaag gatacttgga acgggaagca catgagaggt
                                                                  900
gggcacccgg tgccgaggac atggacgagg gactggtggc tgggagggag aggagggccc
                                                                  960
tgtccggcat gtgtgggtat tccccagaag catttgcctc ctgctgagcc tggtccctga
                                                                 1020
geggagtece agggtgetea getetteage tgaccettet tecettattt attetetttt
                                                                 1080
ctatttatat gtgtggctta ggaccctccg tgaacagatg atagagggca tctctcccag
                                                                 1140
gtgaccette ttttetgtee caggagggtg ggtaatteee tttgggatgg ggeteecaca
                                                                 1200
cctccctcag gtccccactc agaccagcac cagtgtctgc ctctgagaat gttggcagct
                                                                 1260
cacagagage agggeeggee egggatgggg ggeaggtaet ecceaeette etgeeteeee
                                                                 1320
tcctgctcct catccctccc tcccccttta ttaccgtttt ttgtacttga tgccttctct
                                                                 1380
gtgagcagtg gctctgtggg aaggagggag ccgggagcct ggtgggaagc cttccccaga
                                                                 1440
gagatggctt taggggcttt atttaaagac tgtgatgatg gagccacgca aggctgcacc
                                                                 1500
1560
1620
ggcccggtac ccaattcgcc ctatagtgag tcgt
                                                                 1654
<210> 1096
<211> 1193
<212> DNA
<213> Homo sapiens
<400> 1096
aacaggtett teetgtttte tggacetget agaaagette agteagtttg gteeetggga
                                                                  60
gagaaaacgc tcttcccatg acggctctgt ggaggccagg aatggggtag gtgggttgac
                                                                  120
tgggagtact ccttcctgcc gccctggtca agggactagt gtgagtcggg agtgcatttt
                                                                  180
tggaatgggg gcaggggtgt ttttcatgac catttatttg agtggttttg atggttatgc
                                                                 240
atactettta aatttgaate caaatttttt geaaaattae tteecaatea gatettgace
                                                                  300
cttagcctgg gacaccacaa actgaggtga attcyckgct ttgctcgtca caaatgccaa
                                                                  360
```

| catatetttt cacgcacaga ttacacettg actecagtgt ctggegggee tgaegaggtt cetgaeggag tgtteagegt acatgetgea ttaataactt teeteteea agetaaacet | ctttcacggt aatgtgtctg cttacatgtc tgacccttct ttacagcctt acccctctct tattttttc ctgttatgtg ggagatggca aaattcaccc taaaacactt ttattttcat ttcttatgta atgacaaaaa | tttttgtttt aagagtggac cccataacat gctttcctcc atgcaaacac agagccagtg ccgctctagc actcacgtgg agttcccctc ctaaatattt aagtaacaca taaagtatgc | gtttgttta tttagacttt ggtgtgagga caccgaccct gtaaaagcca gctggtcttc gaaggcccca tgccctaggt attttaattt attttggcac gattccctga ctatcatata | tttttattt catgtgttaa cggactggga ggcccaggc tgaatgctgg catttacagt gccgggatgc gcagctgcgt ttctaaccta cagcgtcaag tttttaaaaa cagggagagg | tcagttaacg gttgcttgag gccggtacag tgccccgggc aatccaaaac gtcactattc taggcctaat ggtctggtat cagcttaatt acaaataata ctaaaaatac tgggtaataa | 420 480 540 600 660 720 780 840 900 960 1020 1080 1140 1193 |
|--|--|--|--|---|---|--|
| <210> 1097 <211> 983 <212> DNA <213> Homo | sapiens | | | | | |
| cgaaaagctg atactagctt tgcctctcct gagagagagg ttctgaccct ttagtggtgt tatcagaggt ccctgggcc agcttggtgg gcatcgtgtg tgtgcagaac gggtgttgag ttttgcttt cttggtaccc agagtgatac | gaccccaagt gagctgccaa tggtttctga cagtccccgt gtctggggta tgcttgctta agaaatgcaa gctgtaatct tcttgactgg tagaaagcga tctgactgcc ttccatgttt gctgggtcct ccagttcttg taagatcaga tgtgtggtgg aaaaaaaaaa | cccttccctt ggtattctgc ctgggtggtg gggtggggac tgtactccct gtattttggc ttccagtatc ataaacacc tgttctaaa ttgctgtcca taccacattt ctctagcaat ttgcttttgt agtggtgtgt aaggactgtt | gggacctgcc cctctccctc ggtgcacaat cactggacac tttcaactgt ttaacagcat tctgatatac atgagggctc caactgcagc tacatacaga ttctctcctg ctctaccttc cattgtgaag gtgtgagctg | gattatgcag ccctcttctc accaagtgcc cccaagtgca gttgaatttt gaagtctggg ggctttctgg ttctctgtgg ggctcttcc ctccttccca aactcccttt agaagagact agtcacccag tgagacatgc | ttttcttctg ccaaaacatc tgaaaagcct aactgctgct aatgacgttt ttgcacattg ttgaatgtca agctgccgag tgtctgaact ggcccggctc gtcagcccca tttctaaata gatgctgcg acacccttc | 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 983 |
| <210> 1098 <211> 847 <212> DNA <213> Homo | sapiens | | | | | |
| cgtcagcact gttattttgg ttggggcctg ctacatcttg ccccagctga gccatattaa tgtggttggt gattgtgaaa tagtaatgtg tttcttatat tttgatcatc aatcccacaa | caatgaccaa gagaccagac ggttttgtgt ttctaagtgc cgggggttgt tagcctgtta tggaggaggg caggacggaa aatgggttct aactgaattg gcatgagcca tttgtccacc cctttggttg cactgtcctt | tcgagcaccc tttttggtgg aaacccagca ttctttcttg ataagcactg gaggaaggtg gttggggtaa tgaatgatct cattaagagt aactgttgca cttattagtt ctgcattccc | ctgtcctgta gtttcttcc agtttcactt ttccacaatg gtctaacaca aaatctactg gtttggttgg actataaggc gtgtggcctt tcataattta cttggctgtt cttggttga | agcgagacaa ttggctctcc gtcctgcca aaattgcaca gccaaccctc catgggattc tcagagggag agggaaggtt tgttgtgata gcactgatgt aaccgtagat ttccacgcaa | aatggcgtgt agatttactt ttagatacaa tccatctcca cttccacagc aggaaacagt ttgtgctgga catttgtaag tactatgtat ctgcttttat agatcttgta ggagccacaa | 60 120 180 240 300 360 420 480 540 600 660 720 780 840 847 |

```
<210> 1099
<211> 282
<212> DNA
<213> Homo sapiens
<400> 1099
                                                                      60
ggcacgagac agaatgctgt tgccaaaacc tgcacagccc tgaggccagc ctcggccttg
gtaacggggg aaagtagctg acagtgagac ggggctcctg gcccacgtgt ggggcacggg
                                                                     120
                                                                     180
catcctggat ggttggggag gcgccgacag gcacttcacg tattacaatt ggggatgtgg
gtgagggagg gaatctggtt ttgttacttg gcagtggttt tttctcaccc ttcctttta
                                                                     240
282
<210> 1100
<211> 2707
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (938)
<223> n equals a,t,g, or c
<400> 1100
                                                                      60
gaattcggca cgagcggcac gagctccaat tcaaacaagg agaacatggc aaccttgttt
                                                                     120
acaatttggt gtactctgtg tgaccgcgcc tatccctcgg actgtcccga acatggacca
                                                                     180
gtgacttttg ttcctgacac tccaatagag agcagagcaa ggctttctct cccaaagcag
cttgttctcc gtcagtcaat tgtgggagca gaagttggtg tatggactgg agaaaccatt
                                                                     240
cctgtgcgga cttgctttgg acctctaatt ggccagcaga gtcactccat ggaagtagca
                                                                     300
gaatggacag acaaggcagt taaccatatc tggaagatat accacaatgg tgtcctagaa
                                                                     360
ttctgcatca ttacaactga tgaaaatgaa tgtaattgga tgatgtttgt gcgcaaagcc
                                                                     420
aggaaccggg aagagcagaa tttggtggct tatcctcatg atggaaaaat ctttttctgc
                                                                     480
                                                                     540
acctcacaag atatccctcc tgaaaatgaa ctgctttttt attatagccg agattatgct
                                                                     600
caacagattq qtqttcctqa acacccagat qtqcatctct qtaactqtqq caaqqaqtqc
aattettaca cagagtteaa ageecatetg accageeaca tecataacea tetteetace
                                                                     660
                                                                     720
cagggacata gcggcagcca tgggccaagt cacagcaaag aaaggaagtg gaagtgctca
atgtgcccc aagettttat eteteettee aaactteatg teeactttat gggtcacatg
                                                                     780
ggtatgaagc cccacaagtg tgatttctgt agcaaggctt ttagtgatcc cagcaacctg
                                                                     840
cggacccacc tcaagataca tacaggtcag aagaactaca ggtgtacctt gtgtgacaag
                                                                     900
tctttcaccc agaaggctca cctggagtcc cacatggnta tccacactgg ggagaagaat
                                                                     960
cttaagtgtg attactgtga caagttgttt atgcggaggc aggacctcaa gcagcacgtg
                                                                    1020
ctcatccaca ctcaagaacg ccagatcaag tgtcccaagt gtgataagct gttcttgaga
                                                                    1080
acaaatcact taaagaagca tctcaattct catgaaggaa aacgggatta tgtctgtgaa
                                                                    1140
aaatgtacaa aggcttatct aaccaaatac catctcaccc gccacctgaa aacctgcaaa
                                                                    1200
gggcccacct ccagttcgtc agcaccagag gaggaagaag aggatgactc agaagaggaa
                                                                    1260
gatctagcag actctgtggg gacagaagac tgtaggatta acagtgctgt gtattcagcg
                                                                    1320
gatgagtete tttetgeaca taaataaaag gaaaagaaac aagcaatttt ggatgaaaat
                                                                    1380
                                                                    1440
gcaaatggaa aaatacacat aaccagttat ctactataat ggtttttata taaaatggtt
                                                                    1500
cctgatttat tttcagccag taatcaaaac agactgggaa tgaataaagc acttacagaa
gagtatccta atgaaaacac tttaaaacag attgggaaaa ctgagcatgt gtcctrtttt
                                                                    1560
aagtggtgga ctgggaggga agtgtcaact tctgaggtct ttatttacat gataatctgg
                                                                    1620
                                                                    1680
gagatgcatt tatgcctgaa tcaaagctgc cttctgctca aacaaatcag atttatttca
cattetteca ttattecatt tteetgetgg teetgtgaet tggtaacatt etaaacggte
                                                                    1740
                                                                    1800
cttgccccat agccatcctg attgctgata gtgttttatg cagactcttg tgacttatac
                                                                    1860
tcaccacaga atggattggg acacagcagc ataagtgtgc tacttggcag ctagtaagtt
                                                                    1920
taaagcagga cctgccttaa ctgctcctgg ccacttggaa gtttagggta gatcttgttt
tccaaagttt cggcaggtgc ctggagggca aataaaaaag cagcagtcag tcagtagtca
                                                                    1980
gtgatggaga gaacaagagg agagatgcct ggcctctgcc caagaaatta gctttgatgg
                                                                    2040
aagcctgagc aagtcacctg gttattgtaa cgtggagatc tttgtaggtt tagacatggc
                                                                    2100
tccctgtctc cagtaaacat ccagccattc agacaaaggg ggcctggaga tacagagagc
                                                                    2160
                                                                    2220
ccaaataatg cctgctggat tgtctcctga tgagtacatg tggactcacc tgaggaaggg
                                                                    2280
aaggaaggga ataatctttt atgtttcatt taccttatga aaagtgttaa aacattgcca
```

| actcaaaata | acattattta | atgcatgtgc | aaagttaggt | cttcccagtt | gtctcagtgc | 2340 |
|------------------------|------------|------------|------------|------------|------------|------|
| | | gcatggaaga | | | | 2400 |
| ctgaatagtg | accacatggg | cctgttttca | gggtcccagc | ttagttaagt | cacccatgca | 2460 |
| | | tgcacatcca | | | | 2520 |
| | | tgctctcctg | | | | 2580 |
| agactctaat | gggaaggttt | tgctgctaat | gtatttatgg | aatgaatgta | tttcattcaa | 2640 |
| atctatatta | ctctaggaag | gattaaaatt | aaacttttt | aaaatamaaa | aaaaaaaaa | 2700 |
| | ccccaggaag | gaccaaaacc | aaacccccc | adda bamaa | | 2707 |
| aaaaaat | | | | | | |
| <210> 1101 | | | | | | |
| <211> 429 | | | | | | |
| <211> 423 <212> DNA | | | | | | |
| <213> Homo | anniona | | | | | |
| <213> HOMO | saprens | | | | | |
| <400> 1101 | | | | | | |
| | cadastasta | catggggtca | cccatgacgt | agaactacaa | gagtetgtea | 60 |
| taaatataat | aggaccacc | gtcctccgcc | adacaccacc | actattccaa | acaaaacaat | 120 |
| | | tccattcgta | | | | 180 |
| ccggggacca | ggggctgacc | agatagaga | actttaggg | aacccaacta | aactataccc | 240 |
| caggeacett | cetetteaty | ggctggagcc | gccccgggga | tactaggers | ggccgcgccc | 300 |
| cacgattcca | ggagttccgc | cgtgcctacg | aggetgeeeg | tgetgeedac | ctccacccct | 360 |
| | | ggggctgggt | | | | 420 |
| | tttggaggtg | atgggactat | caataagaac | tetgtteaeg | Caaaaaaaaa | |
| aaaaaaaa | | | | | | 429 |
| | | | | | | |
| <210> 1102 | | | | | | |
| <211> 1721 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1102 | | | | | tatasaatta | 60 |
| | | ctgatcgatt | | | | 120 |
| | | aatcgggaaa | | | | 180 |
| | | tctcctcttc | | | | 240 |
| | | gactttgata | | | | |
| accagagccg | actccagcgc | tacatgaccc | agtttgctga | tcagaatttt | tcagactttc | 300 |
| | | aaaggaaagc | | | | 360 |
| | | tttttgcaag | | | | 420 |
| ttaatagcca | agaattagaa | aaggctcatg | caacacttct | gggtttgcaa | atatggaaac | 480 |
| | | aaacccttct | | | | 540 |
| agacttttca | gaggatatgc | tacaagaaaa | aattgaagaa | atggctgagc | aggagcgctt | 600 |
| tctactgcat | caggagaccc | tacctgaaca | gctgctggcg | gagaaacagc | taaatctcag | 660 |
| | | caccacaact | | | | 720 |
| aagagctaat | gaatatgatt | tcaagaaagc | tttggacttg | ttggaatata | ttgatgagga | 780 |
| agaagatata | aatataaatg | atctaaaact | ggaaatcctt | tgcaaagctc | ttcagagaga | 840 |
| taactggtcc | agttctgatg | gcaaagatga | tccaattgaa | gtatctaaag | acagtatatt | 900 |
| tgtgaagatc | ttacagaaac | ttttaaaaga | tggcattcag | ctcagtgagt | acttaccgga | 960 |
| | | | | | cttacttcga | 1020 |
| | | atgaatatta | | | | 1080 |
| aatggccatt | gtttatgaaa | tctqtataaq | tgtgtcctta | tacaaatttt | aggccataaa | 1140 |
| caagtgtaag | tttgtacaat | ttcataacat | gtatagctga | gtttttatac | tttatatgta | 1200 |
| ggaaggtaat | ataaaataat | tatgtaactg | tgattttggt | tttcagttat | gtgacttgtt | 1260 |
| ttttccacct | gaaatgtgtg | agttgttgtt | cctgtactcg | ataccette | tttttactct | 1320 |
| cacataatca | cadattetee | agttettate | ctaattetaa | ctgctcacat | gtacaaatca | 1380 |
| cttctaggccc | tractttctc | cgactatgaa | aattactaca | ttgcactage | ttgtctctaa | 1440 |
| aattaatata | actccacata | ctttgcactg | aagagaatct | aggatattta | atatctottt | 1500 |
| | | tgtctagtaa | | | | 1560 |
| | | agtgggccta | | | | 1620 |
| | | ttctacataa | | | | 1680 |
| | | aaaaaaaaaa | | | adagcadada | 1721 |
| aaaadaadd | aaaaaaaadd | aaaaaaaadd | aaaaaaaaa | u | | 1121 |
| | | | | | | |

<210> 1103

```
<211> 1287
<212> DNA
<213> Homo sapiens
<400> 1103
                                                                     60
cgtgccgaat tcggcacgag ctaaagattt ttagactgac tgtgggttca ctggaataaa
aaggaagaaa caaagagcat tgcaggcatc gggactgtca catttgacaa gatcaaagct
                                                                    120
gcaggaaaat ggacagtgag gttcagagag atggaaggat cttggatttg attgatgatg
                                                                    180
cttggcgaga agacaagctg ccttatgagg atgtcgcaat accactgaat gagcttcctg
                                                                    240
aacctgaaca agacaatggt ggcaccacag aatctgtcaa agaacaagaa atgaagtgga
                                                                    300
                                                                    360
cagacttagc cttacagtac ctccatgaga atgttccccc cattggaaac tgacgcttgg
                                                                    420
ctcctttctt gtggatggat tttctcaaag tacacagata aagcatggtt tgtttcagtc
                                                                    480
tccaaattca aacctttgag taataaatca gcactcaaaa atgtacaccc atttagtttg
tggtagcaaa gtgcaatgcg aaattgaatg agaaactgag atttctcagt aatggtgaat
                                                                    540
atttcgctct ttaaacctaa aactcttcat tgagtagctt atatttgaac atgattggtt
                                                                    600
                                                                    660
taacatttgc ctctacctct gattttgctt tgctgtcaaa gtttaacacc ttccaactac
                                                                    720
ttatgtgtgt cctgtaacac aggtgattga ccgtatgaga ggggaaaggc aaagaaaaag
                                                                    780
gaagccagac actaggggaa ttattaactt ctcatacttc cccacattga gaagcattcg
                                                                    840
gagtgtattt agccctgtag atgttgtgat atgcaaatat cccattccct ggttactggc
attcctaaga ttcttcatgg tattttcaaa ctttggataa atttacagat tagaaagata
                                                                    900
                                                                    960
tctgacagtt aatctctgtt ctccttacaa attccttttg tgctgctgga aaggatcttt
                                                                    1020
ggctaggtgg atgactagtt ttattcaaag ccttttctca aagccctttc agttacaacc
                                                                    1080
accccactat ggaatcagta tttagttata catttgtata agaacctgta ttttgaaaaa
                                                                    1140
cacattcatg tatatttatt cctggcatta tttgcctgtt aaacagtgtc tttcatgttc
                                                                   1200
tctccccaga ttgtaaactc tgtaagaagc tgcttgtatc tgtatccctt gttgaaactc
1260
aaaaaaaaa aaaaaaaaa aaaactc
                                                                   1287
<210> 1104
<211> 1290
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1279)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1284)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1286)
<223> n equals a,t,g, or c
<400> 1104
                                                                     60
ccaccgcggt ggcggccgct ctagaactag tggatccccc gggctgtttg aattcggcac
                                                                    120
gaggcctggt gcattccgag gctacatcca ggctcatgga aggagtgtag tattcattta
                                                                    180
gccatgtctg ccatgggtcc agaaatggga aagggaattg ctgtccttgc cctgtggtat
gctgccacct ctttgggaag caggccttgc ccctgtccca ccactcattc tcagctttga
                                                                    240
atgggaggcc tttctatagt ggaggccttt ccttgaagcc tatgaactgc aggccccctt
                                                                    300
ttgccattga tctcaaagca cttgtcctca ggatagggaa gagcaggggg atgcaggaat
                                                                    360
                                                                    420
agcagggata gcttgctccc agcccctcc ccaatttggt tccgttgaca taggaatttt
                                                                    480
acgattccca aaccatgcag gggctgagcc ttccttatga tgactttgtt ctcctccca
                                                                    540
ctgggggaat cctccctatg ccttaaaact gccgagcccc actccatgta ataggattcc
tgggcttcct caatgggggt tcatgttctt ggactgcggg ccctcagtcc ttaactggaa
                                                                    600
agtgaccgtc cactgcccca tggagcccat ctggacacag cacagcccca aaaccgttag
                                                                    660
                                                                    720
cagctggctc tgtttccaag cctggggagg ggttcctcag tgcaggagtt ggggacaggc
```

| tagagatcca | agctgcttga | gggggtcaac | cttggaccaa | agttgcctta | agcctgtggt | 780 |
|------------------------|------------|------------|------------|------------|------------|------|
| | cagggaaggt | | | | | 840 |
| | agtgtcttgg | | | | | 900 |
| | cctttggcgt | _ | | | | 960 |
| | agggcctccc | | | | | 1020 |
| | atagagcgcc | | | | | 1080 |
| | catgtgccaa | | | | | 1140 |
| | tcctgtcccc | | | | | 1200 |
| | aatactgctt | | | | | 1260 |
| | acccaattng | | | | | 1290 |
| 9990009900 | account | 000 | | | | |
| <210> 1105 | | | | | | |
| <211> 1037 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1105 | | | | | | |
| | gagaacaaac | taaggcagaa | atactaaaaa | tatctggttc | aataacatag | 60 |
| | tagacatgca | | | | | 120 |
| | tcaatgaaac | - | - | | | 180 |
| | taaataaagg | | | | | 240 |
| | aaatcttatt | | | | | 300 |
| | tgcttttgat | | | | | 360 |
| | gcaggctcat | | | | | 420 |
| | atatagggag | | | | | 480 |
| | atttccataa | | | | | 540 |
| 3 | ttatttttgt | • | | | | 600 |
| | aatgttaaac | | | | | 660 |
| | aacttgtttt | | | | | 720 |
| _ | tggtttaatg | | | | | 780 |
| | gggtattttg | | | | | 840 |
| | tgctgttttt | | | | | 900 |
| | cttgttccat | | | | | 960 |
| | aattcagtca | | | | | 1020 |
| aaaaaaaaaa | | acaaaccccg | tigeteette | CCacccaaaa | aaaaaaaaaa | 1020 |
| aaaaaaaaa | aaaaaaa | | | | | 1057 |
| <210> 1106 | | | | | | |
| <211> 946 | | | | | | |
| <211> 540 <212> DNA | | | | | | |
| <213> Homo | saniens | | | | | |
| \215° 1101110 | Bapiens | | | | | |
| <400> 1106 | | | | | | |
| | agtttggcct | ctcacactct | cccacacctq | ctaaatcctt | ataaatgttt | 60 |
| | ctcaaacttc | | | | - | 120 |
| | ttcttcttag | | | | | 180 |
| | tccaacagct | | | | | 240 |
| | tattgagacc | | | | | 300 |
| | gaatggtttg | | | _ | _ | 360 |
| _ | tatctgcccg | - | | | | 420 |
| | tgggctcttc | | | | | 480 |
| | gatcatctca | | | | | 540 |
| | attaaggatg | | | | | 600 |
| | ctaaagctcc | | | | | 660 |
| | gcctagaatc | | | | | 720 |
| | agagagaggc | | | | | 780 |
| | attctgmtct | | | | | 840 |
| | agaatacatc | | | | | 900 |
| | tagtgcaaaa | | | | <u> </u> | 946 |
| | _ • | | | | | |
| <210> 1107 | | | | | | |
| <211> 1636 | | | | | | |
| | | | | | | |

```
<212> DNA
<213> Homo sapiens
<400> 1107
                                                                     60
aattcggcac gaggtcactg ggagaggcct atgccagaga aactgaggat gaggaggcgg
                                                                    120
aggctgacag aacatccaga agaggctgga ggctgcaagc ggtggctgtg ggcctcccgg
                                                                    180
accgtgagga tgcacagact ggctctgtgg ctgctgggat tatggggggt gatgtggtcc
cacacatcag cgctgctggc gctggtgaag ctttggaagg ggcgcttggg caaggctggg
                                                                    240
actcgaaaga aaaggaagag gcagcagcag gagagcatgc aggtgggcaa gaatttggtc
                                                                    300
                                                                    360
tggagggctc agcagaggaa gaggtgactg gcagaggcag ccaagtagag gcttttgagt
                                                                    420
ccagggaggg aggaccttgg ggagggcggg tagaggccga ggaatctgca ggcgcagagg
                                                                    480
acagctgtgg gctggatccc gcgggctccc agacagcgag ggcagagggg atgggagcca
                                                                    540
tggtggaggc tggggggctt ctagaaaagt ggacgctgtt ggaagaagag gctgttggat
                                                                    600
ggcaggagag agaacagagg gaagacagtg aggggcggtg tggggactac caccctgagg
                                                                    660
gagaggcacc aaggeteett gatgeagagg gteteatggt gaceggggge eggagggeag
                                                                    720
aggccaagga gactgagcca gaaagcctgg aacatgtcag gggccaggag gagcagccaa
                                                                    780
cacaccagge ccctgcagaa gctgcgccgg agtcagtcgg ggaagccgag acggctgagg
                                                                    840
ccatgggcag tgccagagga ggtgctgcca acagctggag cgaggccccg ctccccgggt
                                                                    900
ccctcctaga cgtctctgtc ccaaggagtc gcgtgcacct ctcgagaagc tcctcacagc
                                                                    960
gtcgctcccg gcctctttt cgtcggactc cagcctggga gcagcaggag gagcccccag
                                                                   1020
ccccaaccc tcctgaggag gagctgtcag ctcctgagca gagacccctc cagctggagg
                                                                   1080
aacccctgga gccaagcct ctgaggcatg atgggacccc ggtgccagcc aggagaaggc
                                                                   1140
ccctgggaca cgggtttggc ctcgcgcacc ctggcatgat gcaggagctg caagcccgtc
                                                                   1200
tgggccggcc taagccccag tgactgagac ccggtgctct gggagccagg ccctgagtgg
                                                                   1260
gtgccagaag gcttgctcca atgccactga gccctgctcc ctctgccact gtggacacat
                                                                   1320
cctctccacc ctctgggcct cagtgtcttg atgtatcatt catggagcag gcaaaaccag
acgtctggga agaccgtgaa cttaaggagt ctgattctcc gacacaggct ggtggaccac
                                                                   1380
qtaccccact gagaccacct ctcagggtgc ctgccctggt tcctccccag cctgagtcag
                                                                   1440
ctgtctggac tgcaaggagg ctgggcacgg ggctcacgcc tgtcacccca gagctttggg
                                                                   1500
                                                                   1560
aggccaaggt gggaggatcg cttgagacca ggagttcgag accagcctgg gcagcatagc
                                                                   1620
1636
aactcgaggg ggggcc
<210> 1108
<211> 409
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (388)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (401)
<223> n equals a,t,g, or c
<400> 1108
                                                                     60
gacaattaag cagcatatca aggttcatgt aagttacagt tattaggttt aatatttagt
                                                                    120
tttaatattt ttcacccaac atcttgttgc atcttccaga ataaatctgg ggtccataaa
                                                                    180
ccaaaccagg agagggaaaa tggaaagagt gggcagaaat ctgacagctc ttaggtttct
                                                                    240
tctatttgtg ttaatactga gacttttaaa aatcattttt atatgtagtg tttattatga
                                                                    300
atagttgtaa tttgttctga taaattagtt gtattaaaca ctgttatttg gctaatatta
                                                                    360
ctaggtataa taaaatgata tttagtggga agacattcat caaagtagaa gtagttaatt
                                                                    409
tgggccaggt gcatggctca cgcctgtnaa tcccagccac nttgggagg
<210> 1109
<211> 1652
<212> DNA
<213> Homo sapiens
```

| <400> 1109 | | | | | | |
|--|---|--|--|---|---|--|
| | cgaaggccac | attagtggag | ggaggaaatc | tctqcttqqa | ccttcatcaa | 60 |
| | tgacaattgg | | | | | 120 |
| | aatctactga | | | | | 180 |
| | caaggaattc | | | | | 240 |
| | aatgacacgc | | | | | 300 |
| | cctacccaca | | | | | 360 |
| | atctctcctt | | | | | 420 |
| | agtaatcatg | | | | | 480 |
| actggtacaa | acactgctag | agagaggagc | tagtatagag | caccgagaca | agaaaggttt | 540 |
| tactccactc | atcttggctg | ccacagctgg | tcatgttggt | gttgtggaaa | tattgctgga | 600 |
| | gacattgaag | | | | | 660 |
| | ggaagacagg | | | | | 720 |
| | gtttctgatt | | | | | 780 |
| | atattactaa | | | | | 840 |
| | cctctgatgt | | | | | 900 |
| | ggctctgaca | | | | | 960 |
| | ttccaaggaa | | | | | 1020 |
| | agagctaaga | | | | | 1080 1140 |
| | ggccgagttc | | | | | 1200 |
| | gatacagctt | | | | | 1260 |
| | ggcaggggag gcaaatggtg | | | | | 1320 |
| | gcagcagata | - | | | | 1380 |
| | gtggtgcgct | | | | | 1440 |
| | tacatagcaa | | | | | 1500 |
| | atagtacaag | | | | | 1560 |
| | gaggagttag | | | | | 1620 |
| | agagaaaaaa | | | 5 5 55 | 33 33 | 1652 |
| | | | | | | |
| | | | | | | |
| <210> 1110 | | | | | | |
| <211> 1528 | | | | | | |
| <211> 1528 <212> DNA | | | | | | |
| <211> 1528 | sapiens | | | | | |
| <211> 1528 <212> DNA <213> Homo | sapiens | | | | | |
| <211> 1528 <212> DNA <213> Homo <400> 1110 | | ttttatttac | aacagaatgt | aagaaaagt | aagttattaa | 60 |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga | ttgçtttgta | | | | | 60 120 |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga caataataaa | ttgçtttgta. taactaggaa | gaaaaacaca | gaacagccac | aaaatgacac | agaaggatgg | 120 |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga caataataaa catatgtaag | ttgçtttgta taactaggaa gatcaacttt | gaaaaacaca tgtttgcttt | gaacagccac gcttatagtc | aaaatgacac tgtaatgctg | agaaggatgg tgtattccaa | |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga caataataaa catatgtaag cacctggtcc | ttgçtttgta taactaggaa gatcaacttt ttcagcagtg | gaaaaacaca tgtttgcttt gcagtggtat | gaacagccac gcttatagtc gtggattaat | aaaatgacac tgtaatgctg ttaaccaatc | agaaggatgg tgtattccaa aagatcccag | 120 180 |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga caataataaa catatgtaag cacctggtcc cttgaatgta | ttgctttgta taactaggaa gatcaacttt ttcagcagtg aacactacaa | gaaaaacaca tgtttgcttt gcagtggtat attacacttg | gaacagccac gcttatagtc gtggattaat agctacatgt | aaaatgacac tgtaatgctg ttaaccaatc gagtggtaca | agaaggatgg tgtattccaa aagatcccag ggtacaacac | 120 180 240 |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga caataataaa catatgtaag cacctggtcc cttgaatgta caactcagag | ttgçtttgta taactaggaa gatcaacttt ttcagcagtg | gaaaaacaca tgtttgcttt gcagtggtat attacacttg gggtgatata | gaacagccac gcttatagtc gtggattaat agctacatgt tagaaactga | aaaatgacac tgtaatgctg ttaaccaatc gagtggtaca agggagactt | agaaggatgg tgtattccaa aagatcccag ggtacaacac gcaatttgac | 120 180 240 300 |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga caataataaa catatgtaag cacctggtcc cttgaatgta caactcagag agacatgctt | ttgctttgta taactaggaa gatcaacttt ttcagcagtg aacactacaa accctctcct | gaaaaacaca tgtttgcttt gcagtggtat attacacttg gggtgatata gcaaaaaaca | gaacagccac gcttatagtc gtggattaat agctacatgt tagaaactga tcaagaggct | aaaatgacac tgtaatgctg ttaaccaatc gagtggtaca agggagactt tatcctaaag | agaaggatgg tgtattccaa aagatcccag ggtacaacac gcaatttgac tccttgttaa | 120 180 240 300 360 |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga caataataaa catatgtaag cacctggtcc cttgaatgta caactcagag agacatgctt tttaacaaca | ttgctttgta taactaggaa gatcaacttt ttcagcagtg aacactacaa accctctcct tcaatttaaa | gaaaaacaca tgtttgcttt gcagtggtat attacacttg gggtgatata gcaaaaaaca tattaatggc | gaacagccac gcttatagtc gtggattaat agctacatgt tagaaactga tcaagaggct atctgaaaat | aaaatgacac tgtaatgctg ttaaccaatc gagtggtaca agggagactt tatcctaaag ttcccaacat | agaaggatgg tgtattccaa aagatcccag ggtacaacac gcaatttgac tccttgttaa attcacattc | 120 180 240 300 360 420 480 540 |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga caataataaa catatgtaag cacctggtcc cttgaatgta caactcagag agacatgctt tttaacaaca tcttattaca tttgaaggta | ttgctttgta taactaggaa gatcaacttt ttcagcagtg aacactacaa accctctcct tcaatttaaa aaattacaat ctaactccta gaacacaaaa | gaaaaacaca tgtttgcttt gcagtggtat attacacttg gggtgatata gcaaaaaaca tattaatggc aaagcttaa gaacccaatg | gaacagccac gcttatagtc gtggattaat agctacatgt tagaaactga tcaagaggct atctgaaaat acacttatat ttttgcctca | aaaatgacac tgtaatgctg ttaaccaatc gagtggtaca agggagactt tatcctaaag ttcccaacat ttcaaatgca gcatgccaac | agaaggatgg tgtattccaa aagatcccag ggtacaacac gcaatttgac tccttgttaa attcacattc aacagattgt agtgtgctat | 120 180 240 300 360 420 480 540 |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga caataataaa catatgtaag cacctggtcc cttgaatgta caactcagag agacatgctt tttaacaaca tcttattaca tttgaaggta | ttgctttgta taactaggaa gatcaacttt ttcagcagtg aacactacaa accctctcct tcaatttaaa aaattacaat ctaactccta | gaaaaacaca tgtttgcttt gcagtggtat attacacttg gggtgatata gcaaaaaaca tattaatggc aaagcttaa gaacccaatg | gaacagccac gcttatagtc gtggattaat agctacatgt tagaaactga tcaagaggct atctgaaaat acacttatat ttttgcctca | aaaatgacac tgtaatgctg ttaaccaatc gagtggtaca agggagactt tatcctaaag ttcccaacat ttcaaatgca gcatgccaac | agaaggatgg tgtattccaa aagatcccag ggtacaacac gcaatttgac tccttgttaa attcacattc aacagattgt agtgtgctat | 120 180 240 300 360 420 480 540 600 660 |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga caataataaa catatgtaag cacctggtcc cttgaatgta caactcagag agacatgctt tttaacaaca tcttattaca tttgaaggta tgtgtacact gcagtcactg | ttgctttgta taactaggaa gatcaacttt ttcagcagtg aacactacaa accctctcct tcaatttaaa aaattacaat ctaactccta gaacacaaaa tcagtttcag gacagacttt | gaaaaacaca tgtttgcttt gcagtggtat attacacttg gggtgatata gcaaaaaaca tattaatggc aaaagcttaa gaacccaatg caagaatgaa ttaaatctca | gaacagccac gcttatagtc gtggattaat agctacatgt tagaaactga tcaagaggct atctgaaaat acacttatat ttttgcctca tagttaaaat agaactatgg | aaaatgacac tgtaatgctg ttaaccaatc gagtggtaca agggagactt tatcctaaag ttcccaacat ttcaaatgca gcatgccaac agtttattca ctcagatgac | agaaggatgg tgtattccaa aagatcccag ggtacaacac gcaatttgac tccttgttaa attcacattc aacagattgt agtgtgctat taatcagatt agattgtcc | 120 180 240 300 360 420 480 540 600 660 720 |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga caataataaa catatgtaag cacctggtcc cttgaatgta caactcagag agacatgctt tttaacaaca tcttattaca tttgaaggta tgtgtacact gcagtcactg ctagcctact | ttgctttgta taactaggaa gatcaacttt ttcagcagtg aacactacaa accctctcct tcaatttaaa aaattacaat ctaactccta gaacacaaaa tcagtttcag gacagacttt gagtcagatg | gaaaaacaca tgtttgcttt gcagtggtat attacacttg gggtgatata gcaaaaaaca tattaatggc aaaagcttaa gaacccaatg caagaatgaa ttaaatctca atcagaaagg | gaacagccac gcttatagtc gtggattaat agctacatgt tagaaactga tcaagaggct atctgaaaat acacttatat ttttgcctca tagttaaaat agaactatgg tactaaaact | aaaatgacac tgtaatgctg ttaaccaatc gagtggtaca agggagactt tatcctaaag ttcccaacat ttcaaatgca gcatgccaac agtttattca ctcagatgac atttggacaa | agaaggatgg tgtattccaa aagatcccag ggtacaacac gcaatttgac tccttgttaa attcacattc aacagattgt agtgtgctat taatcagatt agattgtctc ttcctcta | 120 180 240 300 360 420 480 540 600 660 720 780 |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga caataataaa catatgtaag cacctggtcc cttgaatgta caactcagag agacatgctt tttaacaaca tcttattaca tttgaaggta tgtgtacact gcagtcactg ctagctact tttggattatc | ttgctttgta taactaggaa gatcaacttt ttcagcagtg aacactacaa accctctcct tcaatttaaa aaattacaat ctaactccta gaacacaaaa tcagtttcag gacagacttt gagtcagatg tgattacaca | gaaaaacaca tgtttgcttt gcagtggtat attacacttg gggtgatata gcaaaaaaca tattaatggc aaaagcttaa gaacccaatg caagaatgaa ttaaatctca atcagaaagg ttatatgtag | gaacagccac gcttatagtc gtggattaat agctacatgt tagaaactga tcaagaggct atctgaaaat acacttatat ttttgcctca tagttaaaat agaactatgg tactaaaact agtcagctat | aaaatgacac tgtaatgctg ttaaccaatc gagtggtaca agggagactt tatcctaaag ttcccaacat ttcaaatgca gcatgccaac agtttattca ctcagatgac atttggacaa acactggccc | agaaggatgg tgtattccaa aagatcccag ggtacaacac gcaatttgac tccttgttaa attcacattc aacagattgt agtgtgctat taatcagatt agattgtctc ttcctctcta ttcttaagag | 120 180 240 300 360 420 480 540 600 660 720 780 840 |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga caataataaa catatgtaag cacctggtcc cttgaatgta caactcagag agacatgctt tttaacaaca tcttattaca tttgaaggta tgtgtacact gcagtcactg ctagcctact ttggattatc ttagaattac ttggattatc | ttgctttgta taactaggaa gatcaacttt ttcagcagtg aacactacaa accctctcct tcaatttaaa aaattacaat ctaactccta gaacacaaaa tcagtttcag gacagacttt gagtcagatg tgattacaca atcgacgtaa | gaaaaacaca tgtttgcttt gcagtggtat attacacttg gggtgatata gcaaaaaaca tattaatggc aaaagcttaa gaacccaatg caagaatgaa ttaaatctca atcagaaagg ttatatgtag gccagccaat | gaacagccac gcttatagtc gtggattaat agctacatgt tagaaactga tcaagaggct atctgaaaat acacttatat ttttgcctca tagttaaaat agaactatgg tactaaaact agtcagctat gacctattac | aaaatgacac tgtaatgctg ttaaccaatc gagtggtaca agggagactt tatcctaaag ttcccaacat ttcaaatgca gcatgccaac agtttattca ctcagatgac atttggacaa acactggccc tttgttgtcg | agaaggatgg tgtattccaa aagatcccag ggtacaacac gcaatttgac tccttgttaa attcacattc aacagattgt agtgtgctat taatcagatt agattgtctc ttcctctcta ttcttaagag ctgagccatg | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga caataataaa catatgtaag cactggtcc cttgaatgta caactcagag agacatgctt tttaacaaca tcttattaca tttgaaggta tgtgtacact gcagtcactg ctagctact ttggattatc taaaattcct aagagatgcc | ttgctttgta taactaggaa gatcaacttt ttcagcagtg aacactacaa accctctcct tcaatttaaa aaattacaat ctaactccta gaacacaaaa tcagtttcag gacagacttt gagtcagatg tgattacaca atcgacgtaa aaagaaagta | gaaaaacaca tgtttgcttt gcagtggtat attacacttg gggtgatata gcaaaaaca tattaatggc aaaagcttaa gaacccaatg caagaatgaa ttaaatctca atcagaaagg ttatatgtag gccagccaat gaatttaaaa | gaacagccac gcttatagtc gtggattaat agctacatgt tagaaactga tcaagaggct atctgaaaat acacttatat ttttgcctca tagttaaaat agaactatgg tactaaaact agtcagctat gacctattac atacacataa | aaaatgacac tgtaatgctg ttaaccaatc gagtggtaca agggagactt tatcctaaag ttcccaacat ttcaaatgca gcatgccaac agtttattca ctcagatgac atttggacaa acactggccc tttgttgtcg atacattagc | agaaggatgg tgtattccaa aagatcccag ggtacaacac gcaatttgac tccttgttaa attcacattc aacagattgt agtgtgctat taatcagatt agattgtctc ttcctctcta ttcttaagag ctgagccatg cctgaaactt | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga caataataaa catatgtaag cacttggtcc cttgaatgta caactcagag agacatgctt tttaacaaca tcttattaca tttgaaggta tgtgtacact gcagtcactg ctagctact ttggattatc taaaattcct aagagatgcc ttgcagagaa | ttgctttgta taactaggaa gatcaacttt ttcagcagtg aacactacaa accctctcct tcaatttaaa aaattacaat ctaactccta gaacacaaaa tcagtttcag gacagacttt gagtcagatg tgattacaca atcgacgtaa aaagaaagta tgatttatcg | gaaaaacaca tgtttgcttt gcagtggtat attacacttg gggtgatata gcaaaaaaca tattaatggc aaagcttaa gaacccaatg caagaatgaa ttaaatctca atcagaaagg ttatatgtag gccagccaat gaatttaaaa agatgtatca | gaacagccac gcttatagtc gtggattaat agctacatgt tagaaactga tcaagaggct atctgaaaat acacttatat ttttgcctca tagttaaaat agaactatgg tactaaaact agtcagctat gacctattac atacacataa gaatctattc | aaaatgacac tgtaatgctg ttaaccaatc gagtggtaca agggagactt tatcctaaag ttcccaacat ttcaaatgca gcatgccaac agtttattca ctcagatgac atttggacaa acactggccc tttgttgtcg atacattagc tcttagttca | agaaggatgg tgtattccaa aagatcccag ggtacaacac gcaatttgac tccttgttaa attcacattc aacagattgt agtgtgctat taatcagatt agattgtcc ttcctctcta ttcttaagag ctgagccatg cctgaaactt ctgtttata | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga caataataaa catatgtaag cactggtcc cttgaatgta caactcagag agacatgctt tttaacaaca tcttattaca tttgaaggta tgtgtacact gcagtcactg ctagctact ttggattatc taaaattcct aagagatgcc ttgcagagaa cagtgtcttg | ttgctttgta taactaggaa gatcaacttt ttcagcagtg aacactacaa accetetect tcaatttaaa aaattacaat ctaactecta gaacacaaaa tcagtttcag gacagaettt gagtcagatg tgattacaca atcgacgtaa aaagaaagta tgatttatcg aaagaaace | gaaaaacaca tgtttgcttt gcagtggtat attacacttg gggtgatata gcaaaaaaca tattaatggc aaagcttaa gaacccaatg caagaatgaa ttaaatctca atcagaaagg ttatatgtag gccagccaat gaatttaaaa agatgtatca acagttact | gaacagccac gcttatagtc gtggattaat agctacatgt tagaaactga tcaagaggct atctgaaaat acacttatat ttttgcctca tagttaaaat agaactatgg tactaaaact agtcagctat gacctattac atacacataa gaatctattc ttgcaggtat | aaaatgacac tgtaatgctg ttaaccaatc gagtggtaca agggagactt tatcctaaag ttcccaacat ttcaaatgca gcatgccaac agtttattca ctcagatgac atttggacaa acactggccc tttgttgtcg atacattagc tcttagttca tgtggtaagt | agaaggatgg tgtattccaa aagatcccag ggtacaacac gcaatttgac tccttgttaa attcacattc aacagattgt agtgtgctat taatcagatt agattgtcc ttcctctcta ttcttaagag ctgagccatg cctgaaactt ctgtttata gtctgcataa | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1080 |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga caataatataaa catatgtaag cactggtcc cttgaatgta caactcagag agacatgctt tttaacaaca tcttattaca tttgaaggta tgtgtacact gcagtcactg ctagctact ttggattatc taaaattcct aagagatgcc ttgcagagaa cagtgtcttg tatacccaca | ttgctttgta taactaggaa gatcaacttt ttcagcagtg aacactacaa acctctcct tcaatttaaa aaattacaat ctaactccta gaacacaaaa tcagtttcag gacagacttt gagtcagatg tgattacaca atcgacgtaa aaagaaagta tgatttatcg aaagaaacc actgtgctac | gaaaaacaca tgtttgcttt gcagtggtat attacacttg gggtgatata gcaaaaaaca tattaatggc aaagctaaa gaacccaatg caagaatgaa ttaaatctca atcagaaagg ttatatgtag gccagccaat gaatttaaaa agatgtatca acagttactt ttagagattt | gaacagccac gcttatagtc gtggattaat agctacatgt tagaaactga tcaagaggct atctgaaaat acacttatat ttttgcctca tagttaaaat agaactatgg tactaaaact agtcagctat gacctattac atacacataa gaatctattc ttgcaggtat atttcagga | aaaatgacac tgtaatgctg ttaaccaatc gagtggtaca agggagactt tatcctaaag ttcccaacat ttcaaatgca gcatgccaac agtttattca ctcagatgac atttggacaa acactggccc tttgttgtcg atacattagc tcttagttca tgtggtaagt ccaacaacat | agaaggatgg tgtattccaa aagatcccag ggtacaacac gcaatttgac tccttgttaa attcacattc aacagattgt agtgtgctat taatcagatt agattgtcc ttcttcta ttcttaagag ctgagccatg cctgaaactt ctgtttatta gtctgcataa ggctaataaa | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1080 1140 |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga caataatataaa catatgtaag cactggtcc cttgaatgta caactcagag agacatgctt tttaacaaca tcttattaca tttgaaggta tgtgtacact gcagtcact gcagtcact ttggattat ttagattat tagagttat ttagagttat ttagagtat ttagagtat ttagagtat ttagagtat ttagagagaa cagtgtcttg tatacccaca tacttccaaa | ttgctttgta taactaggaa gatcaacttt ttcagcagtg aacactacaa accctctcct tcaatttaaa aaattacaat ctaactccta gaacacaaaa tcagtttcag gacagacttt gagtcagatg tgattacaca atcgacgtaa aaagaaagta tgatttatcg aaagaaaacc actgtgctac taaattaaaa | gaaaaacaca tgtttgcttt gcagtggtat attacacttg gggtgatata gcaaaaaaca tattaatggc aaaagcttaa gaacccaatg caagaatgaa ttaaatctca atcagaaagg ttatatgtag gccagccaat gaatttaaaa agatgtatca acagttactt ttagagattt ttttcctcac | gaacagccac gcttatagtc gtggattaat agctacatgt tagaaactga tcaagaggct atctgaaaat acacttatat ttttgcctca tagttaaaat agaactatgg tactaaaact agtcagctat gacctattac atacacataa gaatctattc ttgcaggtat attttcagga acacagatgc | aaaatgacac tgtaatgctg ttaaccaatc gagtggtaca agggagactt tatcctaaag ttcccaacat ttcaaatgca gcatgccaac agtttattca ctcagatgac atttggacaa acactggccc tttgttgtcg atacattagc tctagtca tgtggtaagt ccaacacat aaaccgtaa | agaaggatgg tgtattccaa aagatcccag ggtacaacac gcaatttgac tccttgttaa attcacattc aacagattgt agtgtgctat taatcagatt agattgtcc ttcttcta ttcttaagag ctgagccatg cctgaaactt ctgtttatta gtctgcataa ggctaataaa cagaagcctt | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1080 1140 1200 |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga caataatataaa catatgtaag cactggtcc cttgaatgta caactcagag agacatgctt tttaacaaca tcttattaca tttgaaggta tgtgtacact gcagtcactg ctagctact ttggattatc taaaattcct aagagatgcc ttgcagagaa cagtgtcttg tatacccaca tactccaaa gataaatcag | ttgctttgta taactaggaa gatcaacttt ttcagcagtg aacactacaa acctctcct tcaatttaaa aaattacaat ctaactccta gaacacaaaa tcagtttcag gacagacttt gagtcagatg tgattacaca atcgacgtaa aaagaaagta tgatttatcg aaagaaaacc actgtgctac taaattaaaa ttcaccaaca | gaaaaacaca tgtttgcttt gcagtggtat attacacttg gggtgatata gcaaaaaaca tattaatggc aaagcttaa gaacccaatg caagaatgaa ttaaatctca atcagaaagg ttatatgtag gccagccaat gaatttaaaa agatgtatca acagttactt ttagagattt ttttcctcac aacccatatt | gaacagccac gcttatagtc gtggattaat agctacatgt tagaaactga tcaagaggct atctgaaaat acacttatat ttttgcctca tagttaaaat agaactatgg tactaaaact agtcagctat gacctattac atacacataa gaatctattc ttgcaggtat attttcagga acacagatgc gtttgagtta | aaaatgacac tgtaatgctg ttaaccaatc gagtggtaca agggagactt tatcctaaag ttcccaacat ttcaaatgca gcatgccaac agtttattca ctcagatgac atttggacaa acactggccc tttgttgtcg atacattagc tctagtca tgtggtaagt ccaacaacat aaaccgtaa cacggtggc | agaaggatgg tgtattccaa aagatcccag ggtacaacac gcaatttgac tccttgttaa attcacattc aacagattgt agtgtgctat taatcagatt tctctctcta ttcttaagag ctgagccatg cctgaaactt ctgtttatta gtctgcataa ggctaataaa cagaagcctt aactaaaaat | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1080 1140 1200 1260 |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga caataatataaa catatgtaag cactggtcc cttgaatgta caactcagag agacatgctt tttaacaaca tcttattaca tttgaaggta tgtgtacact gcagtcactg ctagctact ttggattatc taaaattcct aagagatgcc ttgcagagaa cagtgtcttg tatacccaca tactccaaa gataaatcag gtcacggcct | ttgctttgta taactaggaa gatcaacttt ttcagcagtg aacactacaa acctctcct tcaatttaaa aaattacaat ctaactccta gaacacaaaa tcagtttcag gacagacttt gagtcagatg tgattacaca atcgacgtaa aaagaaagta tgatttatcg aaagaaaacc actgtgctac taaattaaaa ttcaccaaca ccttcattgt | gaaaaacaca tgtttgcttt gcagtggtat attacacttg gggtgatata gcaaaaaaca tattaatggc aaagctaaa gaacccaatg caagaatgaa ttaaatctca atcagaaagg ttatatgtag gccagccaat gaatttaaaa agatgtatca acagttactt ttagagattt ttttcctcac aacccatatt gttccttttc | gaacagccac gcttatagtc gtggattaat agctacatgt tagaaactga tcaagaggct atctgaaaat acacttatat ttttgcctca tagttaaaat agaactatgg tactaaaact agtcagctat gacctattac atacacataa gaatctattc ttgcaggtat attttcagga acacagatgc gtttgagtta ctttgctttg | aaaatgacac tgtaatgctg ttaaccaatc gagtggtaca agggagactt tatcctaaag ttcccaacat ttcaaatgca agcatgccaac agtttattca ctcagacgac atttggacaa acactggccc tttgttgtcg atacattagc tcttagttca tgtggtaagt ccaacaacat aaaaccgtaa caacggtggc tcttgcaaca | agaaggatgg tgtattccaa aagatcccag ggtacaacac gcaatttgac tccttgttaa attcacattc aacagattgt agtgtgctat taatcagatt tctctctcta ttctctctat tcttaagag ctgagccatg cctgaaactt ctgtttatta gtctgcataa ggctaataaa cagaagcctt aactaaaaat acccaaagtg | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1080 1140 1200 1260 1320 |
| <211> 1528 <212> DNA <213> Homo <400> 1110 tttttgaaga caataatataaa catatgtaag cactggtcc cttgaatgta caactcagag agacatgctt tttaacaaca tcttattaca tttgaaggta tgtgtacact gcagtcactg ctagctact ttggattatc taaaattcct aagagatgcc ttgcagagaa cagtgtcttg tatacccaca tacttccaaa gataaatcag gtcacggcct agaaaatgaa | ttgctttgta taactaggaa gatcaacttt ttcagcagtg aacactacaa acctctcct tcaatttaaa aaattacaat ctaactccta gaacacaaaa tcagtttcag gacagacttt gagtcagatg tgattacaca atcgacgtaa aaagaaagta tgatttatcg aaagaaaacc actgtgctac taaattaaaa ttcaccaaca | gaaaaacaca tgtttgcttt gcagtggtat attacacttg gggtgatata gcaaaaaaca tattaatggc aaagctaaa gaacccaatg caagaatgaa ttaaatctca atcagaaagg ttatatgtag gccagccaat gaatttaaaa agatgtatca acagttactt ttagagattt ttttcctcac aacccatatt gttccttttc gaggtgattt | gaacagccac gcttatagtc gtggattaat agctacatgt tagaaactga tcaagaggct atctgaaaat acacttatat ttttgcctca tagttaaaat agaactatgg tactaaaact agtcagctat gacctattac atacacataa gaatctattc ttgcaggtat attttcagga acacagatgc gtttgagtta ctttgctttg | aaaatgacac tgtaatgctg ttaaccaatc gagtggtaca agggagactt tatcctaaag ttcccaacat ttcaaatgca gcatgccaac agtttattca ctcagatgac atttggacaa acactggccc tttgttgtcg atacattagc tcttagttca tgtggtaagt ccaacaacat aaaaccgtaa caacggtggc tcttgcaaca ttatgtgtta | agaaggatgg tgtattccaa aagatcccag ggtacaacac gcaatttgac tccttgttaa attcacattc aacagattgt agtgtgctat taatcagatt tctctctcta ttctcatcta tctgagccatg cctgaaactt ctgtttatta gtctgcataa ggctaataaa ggctaataaa cagaagcctt aactaaaaat acccaaagtg aatacacaa | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1080 1140 1200 1260 |

| | cacttcacat ctaacttcag | | cccagagtta | tgaaatgtac | agtcattttg | 1500 1528 |
|---------------------------|--------------------------|------------|------------|--------------------------|------------|--------------|
| | _ | J | | | | |
| <210> 1111 | | | | | | |
| <211> 1790 <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | Captons | | | | | |
| <400> 1111 | | | | | | |
| taacaagctt | ggcacgaggt | tagggaagca | gggtctggct | tttaatatga | actgcaaaaa | 60 |
| | | | | | ttttttttta | 120 |
| | | | | actcccaaag ataaatagat | | 180 240 |
| tgtggcttca | actgggctta | ttaaagtaag | tgtgtctagt | tttcacttga | acaagtgata | 300 |
| gctgcagatg | gcgaaagaaa | cccatttaat | ttttgtagct | tacaggtggt | agaaacaaaa | 360 |
| atgcaatttt | aaaaccttaa | ataccaaata | ccaaccattg | ccttttttt | ttttgagatg | 420 |
| gagttttgct | cttgtcaccc | aggctggagt | gcaatggcgc | gatctcacct | cactgcaacc | 480 |
| gcatgcccce | ccacacccag | ctaattttct | atttttagta | ccaagtagct aagacagggt | gggattacag | 540 600 |
| | | | | cccacctcgg | | 660 |
| | | | | ataccaacca | | 720 |
| aattcgtgtt | ggcttctcag | acagggagat | cactggaata | aaataaccga | tggtcttatt | 780 |
| | | | | gtaagactcc | | 840 |
| gacacccttt | teggtggact | ctgagtggtg | tgtagtggtt | ttatagccat | ggaaactagg | 900 |
| ttgggcaggg | tcaagtgacc | cagccctagc | tataggacag | tctaagttgg ccatatacag | tgaagagttc | 960 1020 |
| | | | | aggtacctct | | 1020 |
| agccccagta | agctggcttt | aactctcagc | tccttccctg | tctcctccta | atccaagccc | 1140 |
| | | | | cttatgtgct | | 1200 |
| | | | | ctaaaaaata | | 1260 |
| | | | | tgtaaccttc tagcacttaa | | 1320 1380 |
| | | | | aagggctctt | | 1440 |
| | | | | tatgtatatt | | 1500 |
| atagcagcac | atttcattta | tggaaaaatg | ttctcagaat | atttatttac | taatatattt | 1560 |
| atcttaagcc | atgtcttatg | ttgagagtgt | gacattgttg | gaataatcat | tgaaaatgac | 1620 |
| taacacaaga | ccctgtaaat | acatgataat | tgcacacaga | ttttacatat aacaaattgt | ttgcagacca | 1680 |
| gtaaaaaaaa | aatacaattt | tatcaagtaa | aaaaaaaaaa | aacaaacaaa | acacatgact | 1740 1790 |
| J | | | | | | 1,50 |
| <210> 1112 | | | | | | |
| <211> 2324 <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| 1101110 | Saprems | | | | | |
| <220> | | | | | | |
| <221> SITE | | | | | | |
| <222> (41) <223> n equ | | ~~ ~ | | | | |
| \223> 11 equ | ais a,c,g, | or c | | | | |
| <400> 1112 | | | | | | |
| tcccctggca | gcccaagggt | gttgggtccg | cgaagctgga | ntggccctct | ggtggagcct | 60 |
| gcatccttgc | ctcgtctgcc | tctgctttac | atttggtgta | ctttcgggcg | tggtggcagt | 120 |
| aaaatgacac ttgtttcttg | taagatatgag | treatesta | gagctgaaag | agaaagtaga | aggatgtgca | 180 |
| gtccatttgt | ccactgagaa | attataaact | agggacaagg | aarrcadaca | gagatggttt | 240 300 |
| acagtttatg | aagcaagtgt | gtctcgggct | gtgcttgtcc | caggagcccc | agcagcatct | 360 |
| gaactgaggc | ttcttcagtc | ctgcaggaac | aggatcatct | gtctcagcgg | tgggcagatg | 420 |
| ttttcataga | | | | | | 480 |
| taaatagtac catatattgt | ayagatgtgg tctqtqtqaa | cigigiciag | tacaactttt | agacacagaa | atctgaatga | 540 |
| Jacatattyt | cocycyccad | gaaactaya | | aactatttää | aaacytyaaa | 600 |

```
cctattctta gctcacaggc catggagaag ctggtgggga ccagacccag ctccttagct
                                                                       660
ggctgggctg gggaggggt agtgacagtg gcagctgcta ctcactgctc agtgtggaaa
                                                                       720
acacaggact tggcaatcac agcccgcaga accatcatgt gtggcagaag cctgagggat
                                                                       780
gcggtttctt gcccacgtgc tctgttcatt ttctgttgtt tttctgcact taaagaattc
                                                                       840
acatggaagc atgttttata aaatgaatta ccagagaaac agagatgggc cgagattttc
                                                                       900
agaaatggtc ccatgtgacc aagttctgct gtttgggtga cagtgctttg aagatctcct
                                                                       960
ttgaggatgt gcagtctttt ttttttttt tttgagatgg agtttgttgc ccaggctgga
                                                                      1020
gtgagtggca cagtctcggc tcactgcaac ctccacctcc tgggttcaag cagttctcgt
                                                                      1080
gccgcagcct cccaagtagc tgggactaca ggcatgcacc accacgccag gctaattttt
                                                                      1140
gtatttttag tagagatggg gtttcaccat gtctcaaact cctgacctca ggcgatccac
                                                                     1200
ccacctcagc gtcccaaagt gctgggatta taggcgtgag ccaccgcacc tggcctatga
                                                                     1260
gtggtctttt aattaggaac aaatctaatg gaaaggagag ttgactgaag ttggcccaca
                                                                     1320
ggattgtgag ctgggcagtg ccttcatgaa ggcttgccac cttgggacgc cccagtttac
                                                                     1380
tggggtgtct tgcggagtgc agaaggcttt ctggcagctg cctgggtttg gccagaccct
                                                                     1440
gcctcccctc ccgccggcca acccctagtc cccttcctgt ctccacttgc attcaggggt
                                                                     1500
ggctgctgtt ctgagaacat tagaactggg aagagagatg gagtcacatg gatttttggt
                                                                     1560
gggcattatt ctaaactttc gtatccaagt tagtccccct tattccactg tggcattgcc
                                                                     1620
gttctaagca gttacctgat gcctgctgct gaagagctgc tcacaggagg cggcggc
                                                                     1680
cctggcactg ccccttgcat taggtcttgt gtttgatgtg ttcttgtgaa tttactttgt
                                                                     1740
cagaacaaaa tatttacgcg ttgggttcag gaatttcttt tagctcccca tctggctgtg
                                                                     1800
aaattcagga aacctcccgt tgcctagtaa tcaccccatg taggtgtaca ttgtgacaaa
                                                                     1860
gtgcatctga ccactaaggg gcccccttgg tgaccccagc acattcacag cagtgttaaa
                                                                     1920
atggcctgca ttttggagat gctggctggc ctttcagtgc ctcccaggaa gacacatggc
                                                                     1980
ctttccctct tcagatgcct gaagggagtg ctttgaggca ggtgatgtgc tgggagtgtg
                                                                     2040
ggcggcctcc ctctggcccc ggggccctct gtggaccttg gctccctccg tggacctggg
                                                                     2100
cttcgtggtg agcactgcag cctccctggg cattccctcc agcgccagca ccactgcaac
                                                                     2160
atatagacct gagtgctatt gtattttggc ttggtgtgta tgctcttcat tgtgtaaaat
                                                                     2220
tgctgttctt ttgacaattt aagtgattgt tttgtttact gtaagtttga aaataaaaat
                                                                     2280
gaagaaaaa attccaatga caaaaaaaaa aaaaaaaaa aaaa
                                                                     2324
<210> 1113
<211> 2913
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (2288)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2753)
<223> n equals a,t,g, or c
<400> 1113
acaaaagctg gagctccacc gcggtggcgg ccgctctaga actagtggat cccccgggct
                                                                       60
gcaggaattc ggcacgagat acgattgacg tatgtaatac tgttgacata aaaactgagg
                                                                      120
atctgtctga cagcctgcca cccgtttgtg acacagtagc cactgactta tgttccacag
                                                                      180
gcattgatat ctgcagtttc agtgaagata taaaacctgg agactctctg ttactgagtg
                                                                      240
ttgaggaagt actccgcagc ttagaaactg tttcaaatac agaggtctgt tgccctaatt
                                                                      300
tgcagccgaa cttggaagcc actgtatcca atggaccttt tctgcagctt tcttcccagt
                                                                      360
ctcttagcca taatgttttt atgtccacca gtcctgcact tcatgggtta tcatgtacag
                                                                      420
cagcaactcc gaagatagca aaattgaata gaaaacgatc cagatcagag agtgacagtg
                                                                      480
agaaagttca gccacttcca atttctacca ttatccgagg cccaacactg ggggcatctg
                                                                      540
ctcctgtgac agtgaaacgg gagagcaaaa tttctcttca acctatagca actgttccca
                                                                      600
atggaggcac aacacctaaa atcagcaaaa ctgtactttt atctactaaa agcatgaaaa
                                                                      660
agagtcatga acatggatcc aagaaatctc actctaaaac caagccaggt attcttaaaa
                                                                      720
aagacaaagc agtaaaggaa aagattccta gtcatcattt tatgccagga agtcctacca
                                                                      780
agactgtgta caaaaaaccc caggaaaaga aagggtgtaa atgtgggcgt gctactcaaa
                                                                      840
atccaagtgt tcttacatgc cgaggccaac gctgcccttg ctactctaac cgcaaagcct
                                                                      900
```

```
960
gcttagattg tatatgtcgt grctggsaaa acycctatat ggccaatggg gagaagaagc
                                                                     1020
tggaggcatt tgccgtgcca gaaaaggcct tggagcagac caggctcact ttgggcatta
acgtgactag cattgctgtg cgtaacgcta gtaccagcac cagtgtaata aatgtcacag
                                                                     1080
ggtccccagt aacgacgttt ttagctgcca gtacacatga tgataaaagt ttggatgaag
                                                                     1140
ctatagacat gagattcgac tgttaaatca gtgggtcttt taaacctact cctggtaggg
                                                                     1200
aaatagctac agttttacgg cagctatggt tctgttggtt taacttgccg gagctcctgc
                                                                     1260
atatagatca cttgtatcaa gtgttttcat tgctaagtta tatgtgttag tgtcggggaa
                                                                     1320
atagtttgca gataatggag gagtaaccct acaactatat gtccttagtt cttacagaac
                                                                     1380
ctcatagttt gagaacaaag ctgatgcaac tgatttatac aaaatgaact ttggcaagaa
                                                                     1440
aaataacatt aacctcattg tttatggcca tgctttgtgc ataatcaaag tttatgatta
                                                                     1500
aatgtaagga agtggtatct agtcagtcca taaagattgt gctaattttt ttgtggaaaa
                                                                     1560
gtagccatta gttcaggaaa ctcagtgctg ccttcagatg tcattgatgt ttctcctgtt
                                                                     1620
ggaaagctga tgtgtccagc tcaacctttg tgctgacatc ataccatttc tgatcatgaa
                                                                     1680
atattggcta ctggtgtatg tagcagttct taaatcagca gtattatgaa aaaaaattcc
                                                                     1740
                                                                     1800
ccctcattag aatgtttaag aaatcttttt aaaaagtaaa attctgtcag actacaaatg
                                                                     1860
tttagctgtt actcatttct agggaagaaa ttctaaatcc ctccttcact ttgagcagtg
                                                                     1920
ttctaattgg gataaatgaa ggagagtagt tttattctga aggtaattaa atttagacta
                                                                     1980
tgtagtatgt gacagaattt ttttaaaaatt atwaaaagrt tttatttagt aattgggatt
tacttaaaat aattttggaa taatgctccc agacttgccc agatttgtgt attgtactta
                                                                     2040
ttgccactgg ccgccacttt gacttatttt ctctaatagt ttatttgcca cagtctttat
                                                                     2100
                                                                     2160
tttgaatatg ctcctagttt ttttttaggg tgctgttcat tatgaaggct tctttataga
                                                                     2220
ggcctaataa gaatgccttt ttataaagcc tgtgcattta ggtaggttga agctaggagg
                                                                     2280
attttcttta gaatgctctt ttgcatgtaa agcacaaagt atgtttcagt ttaaatgcac
                                                                     2340
ttcttccngg ttaattttwa tggggaagac aagtgagtca caaacattct gttgaaggga
                                                                     2400
aatctagtca gttgcttgaa agagcacagc ccaaataaaa caaggactga ctaggtgtaa
tgaaataacc tgtgatttaa aagaagagct gcagctttga cagtgcttat ttaaagaaaa
                                                                     2460
                                                                     2520
atactgctgg aaaatttcca atttctacta cgttcaccat ctctagtaag atctgacata
                                                                     2580
tgctgaagtt atgttttgat ttggcacaca gcatgttcaa tgatggttac tcgcctagta
                                                                     2640
caagacatgg agaagaaacc tttggacaca gagcagatga cacctccttc tgttttgtag
                                                                     2700
tgtatcctgg tgtcattttc tgtgaatgtg gtcaggtaga gttgtttttg ttgttgttgt
                                                                     2760
tgggcttttt tttcttttt ttttttggt ctcttttggt ggggtggggg tgngctaaag
ccataggaag aaaaatgtga tgtgtccagt atgtactatt ttgtttttgt tttgcaagaa
                                                                     2820
                                                                     2880
gagttgaact atttttgata acaagagtaa atggtggaaa atgcttaaaa aaaaaaaaa
                                                                     2913
aaactcgagg gggggcccgt acccaatcgc cct
<210> 1114
<211> 424
```

```
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (409)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (416)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (417)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (421)
<223> n equals a,t,g, or c
<400> 1114
```

```
60
ccqqttqqtc tcgaactcct gacctcaagt gatccacctg cctcggcctc ccaaaatgct
gggattacag gcatgagcca ctgcgtctgg tccttggctg tttcttagsc ccactcctgg
                                                                     120
cagtgtctct tctcttcagc tatgactggg gagtagatga ccgtgcttgt ttctgacaca
                                                                     180
cagcacagtg tcctctctgt acacaagctg gtggttcaag ggccaatggt tccagagaga
                                                                     240
tagtggttcc cttccttccc tcctcaccaa taggcagcct caggcctttt ctgtgtataa
                                                                     300
                                                                     360
ctgtgtatat agacataaaa acctacaaat gtgaaataaa tctatgctat ctttcatagt
420
                                                                     424
ntta
<210> 1115
<211> 1844
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1699)
<223> n equals a,t,g, or c
<400> 1115
aggaagtgcc gatcggctgc tggggcgaaa agggggcgcc gggccgctct agccgccctg
                                                                     60
                                                                     120
gtccagcgcc tccctctctc agcatggacg aggagagcct ggagtcggcc ttgcagacct
                                                                     180
accqtqcqca tqcaqcaqqt qqaqctqqcc ttqqqcqccq qcctqqattc qtctqaqcaq
                                                                     240
gctgacctgc gccagctgca gggggacctg aaggagctca tcgagctcac cgaggccagc
ctggtgtctg tcaggaagag caggttgttg gccgcgctgk acgaagagcg cccgggccgc
                                                                     300
cargaagatg ctgagtacca ggctttccgg gaggccatca ctgaggcggt ggaggcacca
                                                                     360
gcagcggccc gtgggtccgg atcagagacc gttcctaaag cagargcggg gccagaatct
                                                                     420
gcggcargtg ggcaggagga ggaagaggga gaggacgagg aagagctgag tgggacaaag
                                                                     480
gtgagcgcgc cctactacag ctcctggggc actctggagt atcacaacgc catggtggtg
                                                                     540
ggaacggaag aggcggagga tggctcggcg ggtgtccgtg tgctttacct gtaccccact
                                                                     600
cacaagtete tgaageegtg ecegttette etggagggaa agtgeegett taaggagaae
                                                                     660
tgcaggttct cccatgggca ggtggtctct ctggatgagc tgcgcccctt ssaggaccca
                                                                     720
gacctgagct ccctgcaggc cggctctgcg tgtctggcca agcaccagga tggcctctgg
                                                                     780
macgcagcac gcatcaccga tgtggacaac ggctactaca cagtcaagtt tgactcgctg
                                                                     840
ctgctgaggg aggccgtggt ggagggggac ggcatcctgc ccccactgcg cacagaggcc
                                                                     900
acagagtccg actcagacag cgacggtacg ggtgactcca gctatgccag agtggtgggg
                                                                     960
tcagatgctg tggactctgg gacctgcagc tctgcctttg ctggctggga ggtgcacacg
                                                                    1020
cgaggtatag gctccagact cctcaccaag atgggctatg agtttggcaa gggtttgggc
                                                                    1080
cgacacgcgg aaggccgggt ggagcccatc catgctgtgg tgttgcctcg agggaagtcg
                                                                    1140
ctggaccagt gtgtggagac cctgcagaag cagaccaggg ttggcaaggc tggcaccaac
                                                                    1200
aagcccccca ggtgccgggg aagaggggcc aggcctgggg gccgcccagc tcctcggaat
                                                                    1260
gtgtttgact tcctcaatga aaagctgcaa ggtcaggctc ctggggccct agaagccggg
                                                                    1320
gcggcccag cgggaaggag gagcaaggac atgtaccatg ccagcaagag tgccaagcgg
                                                                    1380
                                                                    1440
gccctgagcc tgcggctctt ccagactgag gagaagatcg agcgaaccca gcgggacatc
                                                                    1500
aggagcatcc aggaggctct cgcccgcaac gctggccggc atagcgtggc gtcagcccag
ctgcaggaga agctggcagg agcccagcgc cagctggggc agctccgggc tcaggaagcc
                                                                    1560
                                                                    1620
ggcctgcagc aggagcagag gaaggcagac acccacaaga agatgactga gttctagaga
                                                                    1680
ccccacaagc actatggacg aagcgtggga ccccagcacg ggctgccctc aggaagacca
                                                                    1740
gtgttgcccg aggaggggnc gcctgctggc ctggggcgtg cggacactgc tgagtggaga
                                                                    1800
cagagetgeg gggteceate tggacaetta ettgeceaee tgecagtgte ttgggeattt
                                                                    1844
ccttqqcaaq qacattaaag tgatttcatc acagaaaaaa aaaa
<210> 1116
<211> 2124
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (8)
<223> n equals a,t,g, or c
```

```
<220>
<221> SITE
<222> (76)
<223> n equals a,t,g, or c
<400> 1116
                                                                     60
ggcggttnaa agggcaatca gctgttgccc gtctcactgg traaaagaaa aaccaccctg
                                                                    120
gcgcccaata cgcaanccgc ctctcgccgc gcgttgccga ttcattaatg cagctggcac
                                                                     180
gacaggtttc ccgactggaa agcgggcagt gagcgcaacg caattaatgt gagttagctc
actcattagg caccccaggc tttacacttt atgcttccgg ctcgtatgtt gtgtggaatt
                                                                     240
                                                                     300
gtgagcggat aacaatttca cacaggaaac agctatgacc atgattacgc caagctctaa
                                                                     360
tacgactcac tatagggaaa gctggtacgc ctgcaggtac cggtccggaa ttcccgggtc
                                                                     420
gacccacgcg tccgagttaa tagacacttg aattgttttc ggtttttggc aattaggaat
aaagccactg ttaacattca catataagtc tttgtgtggg tgtgtatttt cttacttctt
                                                                     480
                                                                     540
ctgtgaatac tcataaatgg gactgctcag ttatatgata aatatatgtt taactttgta
agaaactgct gaattatttt mcaaagtggt tgtaccatcc cgcattccca tcagcaatgt
                                                                     600
ttggaaattc cagttgctcc acatacttgt tatgggtcag tctttttaat ttcggccatt
                                                                     660
                                                                     720
ctagtgagtg tataatgatt tcttgctatg gttttaaatt tgcgttttcc taaagactaa
tgatgttgag tattttataa tagttattgg accaaaggga gttcttcatc tttgtaacat
                                                                     780
tgatataata agattattta attgctagtt gatactcagg ttttgtcact tgtcccaata
                                                                     840
                                                                     900
atgtccataa caagcttttc cttcctctag atmcaaacta tgaccacaca ttgggtttag
ttgtcatgtt tctttggttt cttttaatct cagttttctt tgtctttctt agacctcaac
                                                                     960
                                                                    1020
ttaaaaaaaa ataataaaaa agcataggcc tattattttg taacatgtct gtcaatttgg
gtttatctga tatttcctta tgataagatt caggttggta tttttggcaa gaatgttaca
                                                                    1080
                                                                    1140
gaaattatct tataaccttt tcaagggcat tgtatcaagg acccccgtat gtgactatta
gtgatgactt tgtatgttgc ccaagaaatt tatgcctatt ctaatgttgc taataatttt
                                                                    1200
cctgttttct tctagaattt tcatagtttc ggcttttaag tttatgaact atttagaaat
                                                                    1260
attttgtgtg tgtgatgtga aatagggatt gaggttcatt cattttttt ttcaactttt
                                                                    1320
tgccttatta gcttttccta tttctttgay ttctgcttat tattattcta ctttctttga
                                                                    1380
                                                                    1440
aatttaattt gctcttcttt ttctaccttt ttaagttgaa aacttaggtc aatgttttat
gacctttctt ttttttaata taagtattta aagctatgta tttcctgcta agtactagta
                                                                    1500
tactgcatcc catgaatttt gatatgtaat ttttattatc acttagttca aaatatttcc
                                                                    1560
                                                                    1620
taattccctt tgtaattttt ttgacccttg ggttattgag aactgtattt aggaatactt
                                                                    1680
ggggctttta tagatatttt actgctagtg gttttttgtt taagtgtgtg tctktgtgta
tgtgtgtgtg tatgtgtgta tcagcaacta taaagatctc agtattttga aatgtattga
                                                                    1740
                                                                    1800
aacttatttt atggttagtc tattctcaca ctgctataaa gaactgcctg arcgtgggta
aatttacaaa gaaaagaggt ttaattgact caaggkktaa ttgactcaag gttctgcatg
                                                                    1860
gctggggagg ccttaggaaa cttacaatga tggcagaagg ggaagcaggc atgtcttaca
                                                                    1920
                                                                    1980
cagcagcagg caagagagta tgtgagagca caggaaaaac taccgtttat aaaaccttca
gatctggtga gaattcactc actatcacga gaaggcttag aagaaaaccc cacaaacccc
                                                                    2040
2100
                                                                    2124
aaaaaaaaa aaaaaaaaaa aaaa
<210> 1117
<211> 2312
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (239)
<223> n equals a,t,g, or c
<400> 1117
ggcggactga caggcccggg caagggtcgc ttcctcgtcc gcatctgttt ccagggagac
                                                                      60
                                                                     120
gagggcgcct gccgaacccg ggacttcgtg gtaggagcgc ttatcctgcg ctcatcggca
tggacccgag cgacatctac gcggtcatcc agatcccggg cagccgcgaa ttcgacgtga
                                                                     180
                                                                     240
gcttccgctc agcgagaagc tggccctgtt cctacgcgtc tacgaggaga agcgggasna
                                                                     300
ggaggactgc tgggagaact ttgtggtgct ggggcggaca agtccagctt gaagacgctc
ttcatcctct tccggaacga gacggtggac gtggaggaca ttgtgacttg gctcaagcgc
                                                                     360
```

| crctgcgacg | tgctggccgt | gccggtgaaa | gtgaccgaca | ggtttgggat | ctggaccggg | 420 |
|---|--|---|---|---|---|---|
| gagtacaaat | gcgagatcga | gctgcgccag | ggggagggcg | gggtcaggca | cttgccaggg | 480 |
| accttcttcc | tgggggccga | gaggggctac | agctggtaca | aggggcagcc | caagacatgc | 540 |
| tttaaatgtg | gttcccggac | ccacatgagc | ggcactgcac | gcaggacagg | tgcttcaggt | 600 |
| gcggggagga | ggggcacctg | agcccttact | gccggaaggg | catcgtgtgc | aacctctgtg | 660 |
| gcaagcgagg | acacgccttt | gcccagtgtc | ccaaagcagt | gcacaattcc | gtggcagctc | 720 |
| agctaaccgg | cgtggccggg | cactaaacac | ccgcctgcct | gccagggtga | acacacagcc | 780 |
| agettatece | tcttaagtgc | caaaactttt | ttttaaacca | ttttttatcg | tttttgaagg | 840 |
| agatetttt | aaaacctaca | agagacatct | ctctatgcct | tcttaaaccg | agtttactcc | 900 |
| atttcacct | gttctgaatt | ggtgactctg | tcaccaataa | cgactgcgga | gaactgtagc | 960 |
| atacagatat | gttgccctc | ccttttaaaa | ttttattttc | gtttttctat | tgggtatttg | 1020 |
| tttattat | tgtacttttt | ctctctctcc | ttaccccct | cccacctcc | ccgccccata | 1080 |
| cattttatta | ccctggattt | traccettta | aactacctta | ctcatcttta | taccccaaca | 1140 |
| ctacatacaa | ggcccaacac | ataataaaca | ctccatcagt | gtttgctgaa | ttgaaaacat | 1200 |
| tattanatat | ggcttctatc | agagtatata | ccttttacaa | ctcttccct | ccctcattta | 1260 |
| tgttgattgt | tttaatctac | ataatataaa | aatttotoaa | accantatta | ttagaagtgt | 1320 |
| accigetget | aatcaataag | gtggtctgag | taaccaaaaa | ctctcttata | gcacaaagat | 1380 |
| atataatetg | aatcaataay | atttaataa | ctcacaggg | atttttata | geacaaagac | 1440 |
| gcatggactt | catgacagct | cttttggtgg | cccagaagcc | tagaggaatt | ccctaattt | 1500 |
| atctagaata | ttcctgctgg | aaagaacctg | agagitggtt | tggaccaacc | atactetet | 1560 |
| ccagcagatg | aaacaggccc | aaagaggtta | aatgactggg | ragagataat | catteracta | 1620 |
| ggtgccagag | ccagcctata | gtagagtccc | ctgaccccaa | geeeggtget | tantatataa | 1680 |
| cctctcacac | ttcacaacaa | tttcctcaac | acttgagggc | ccagaaagtc | cyatetetee | 1740 |
| agaatgatca | gcccagagga | atgctgagaa | atcacctgga | ggagggagca | gaaagagaag | 1800 |
| gtttttaagg | aggggcttct | gaatacttgg | gagatacgga | acggaccaag | gaccacactc | 1860 |
| cagggtgcat | tcgttgctcc | ctggggcacc | acttctggat | tacagtgtgc | caggicetti | |
| ggaggcccta | ccccttcccc | attcattgcc | accagtgaga | aatgggggtg | cccctgtgta | 1920 |
| aagaaaccta | ccaaaggttt | acatttgcac | cttagcctca | atagctacga | accctagaga | 1980 |
| agcagctagc | tggagctcat | gtgcaactcc | tgattctcag | gagaaagatg | gattttaacc | 2040 |
| caaaattatg | agtgagctgt | taactctaaa | atgtacttgg | gagataggcc | aagcgagagg | 2100 |
| a | | atagagtaga | aaagagagta | cactactttt | cttttaatat | 2160 |
| teatgggeea | actaagtytt | atticagtaga | aaayacayca | caccycecce | cttttagtgt | |
| ttgcttttcc | tttgctatat | gttttgctat | ttccttgtgg | cttagaatgt | aaaattgatt | 2220 |
| ttgcttttcc | tttgctatat | gttttgctat | ttccttgtgg | cttagaatgt | aaaattgatt | 2220 2280 |
| ttgcttttcc gttaaaagtt | tttgctatat ttgttctgaa aaaaaaaaaa | gttttgctat taaatattta | ttccttgtgg tcttttgtat | cttagaatgt | aaaattgatt | 2220 |
| ttgcttttcc gttaaaagtt | tttgctatat ttgttctgaa | gttttgctat taaatattta | ttccttgtgg tcttttgtat | cttagaatgt | aaaattgatt | 2220 2280 |
| ttgcttttcc gttaaaagtt | tttgctatat ttgttctgaa | gttttgctat taaatattta | ttccttgtgg tcttttgtat | cttagaatgt | aaaattgatt | 2220 2280 |
| ttgcttttcc gttaaaagtt aaaaaaaaaa | tttgctatat ttgttctgaa | gttttgctat taaatattta | ttccttgtgg tcttttgtat | cttagaatgt | aaaattgatt | 2220 2280 |
| ttgcttttcc gttaaaagtt aaaaaaaaaa <210> 1118 | tttgctatat ttgttctgaa | gttttgctat taaatattta | ttccttgtgg tcttttgtat | cttagaatgt | aaaattgatt | 2220 2280 |
| ttgcttttcc gttaaaagtt aaaaaaaaaa <210> 1118 <211> 1058 <212> DNA | tttgctatat ttgttctgaa aaaaaaaaaa | gttttgctat taaatattta | ttccttgtgg tcttttgtat | cttagaatgt | aaaattgatt | 2220 2280 |
| ttgcttttcc gttaaaagtt aaaaaaaaaa <210> 1118 <211> 1058 | tttgctatat ttgttctgaa aaaaaaaaaa | gttttgctat taaatattta | ttccttgtgg tcttttgtat | cttagaatgt | aaaattgatt | 2220 2280 |
| ttgcttttcc gttaaaagtt aaaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 | tttgctatat ttgttctgaa aaaaaaaaaa sapiens | gttttgctat taaatattta aggggggggg | tteettgtgg tettttgtat ge | cttagaatgt tgctaaaaaa | aaaattgatt aaaaaaaaaa | 2220 2280 2312 |
| ttgcttttcc gttaaaagtt aaaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 gactttttt | tttgctatat ttgttctgaa aaaaaaaaaa sapiens catctgctta | gttttgctat taaatattta aggggggggg ttttcagcct | ttccttgtgg tcttttgtat gc atgtgtgtct | cttagaatgt tgctaaaaaa ttataagtga | aaaattgatt aaaaaaaaaa | 2220 2280 |
| ttgcttttcc gttaaaagtt aaaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 gactttttt ttgtagacaa | tttgctatat ttgttctgaa aaaaaaaaaa sapiens catctgctta cagataattg | gttttgctat taaatattta agggggggg ttttcagcct ggtcttgttt | ttccttgtgg tcttttgtat gc atgtgtgtct ttttatccat | cttagaatgt tgctaaaaaa ttataagtga tcagagccac | aaaattgatt aaaaaaaaaa aatgtgtttc tctgtgtctt | 2220 2280 2312 |
| ttgcttttcc gttaaaagtt aaaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 gactttttt ttgtagacaa ttgatttgag | tttgctatat ttgttctgaa aaaaaaaaaa sapiens catctgctta cagataattg agtttagtgc | gttttgctat taaatattta aggggggggg ttttcagcct ggtcttgttt gtttccattg | ttccttgtgg tcttttgtat gc atgtgtgtct ttttatccat ttattaagaa | cttagaatgt tgctaaaaaa ttataagtga tcagagccac gtaaggatat | aaaattgatt aaaaaaaaa aatgtgtttc tctgtgtctt gttctgccat | 2220 2280 2312 60 120 180 |
| ttgcttttcc gttaaaagtt aaaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 gactttttt ttgtagacaa ttgatttgag | tttgctatat ttgttctgaa aaaaaaaaaa sapiens catctgctta cagataattg agtttagtgc | gttttgctat taaatattta aggggggggg ttttcagcct ggtcttgttt gtttccattg | ttccttgtgg tcttttgtat gc atgtgtgtct ttttatccat ttattaagaa | cttagaatgt tgctaaaaaa ttataagtga tcagagccac gtaaggatat | aaaattgatt aaaaaaaaa aatgtgtttc tctgtgtctt gttctgccat | 2220 2280 2312 60 120 |
| ttgcttttcc gttaaaagtt aaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 gactttttt ttgtagacaa ttgatttgag tgtattgtt | tttgctatat ttgttctgaa aaaaaaaaaa sapiens catctgctta cagataattg agtttagtgc gtcttttgct | gttttgctat taaatattta aggggggggg ttttcagcct ggtcttgttt gtttccattg tgttttttgg | ttccttgtgg tcttttgtat gc atgtgtgtct ttttatccat ttattaagaa tcttctcttc | ttataagtga tcagagccac gtaaggatat cttcttcat | aaaattgatt aaaaaaaaaa aatgtgtttc tctgtgtctt gttctgccat tccttcattt | 2220 2280 2312 60 120 180 |
| ttgcttttcc gttaaaagtt aaaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 gactttttt ttgtagacaa ttgatttgag tgtattgtt cttttattga | tttgctatat ttgttctgaa aaaaaaaaaa sapiens catctgctta cagataattg agtttagtgc gtcttttgct aggtgatttt | gttttgctat taaatattta aggggggggg ttttcagcct ggtcttgttt gtttccattg tgttttgtgg gtcttgtggt | atgtgtgtct ttttatcat ttattaagaa tcttctcttc | ttataagtga tcagagccac gtaaggatat cttcttcat | aaaattgatt aaaaaaaaa aatgtgtttc tctgtgtctt gttctgccat tccttcattt ttattttta | 2220 2280 2312 60 120 180 240 |
| ttgctttcc gttaaaagtt aaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 gactttttt ttgtagacaa ttgatttgag tgtattgtt ctttattga ggtatatgty | tttgctatat ttgttctgaa aaaaaaaaaa sapiens catctgctta cagataattg agtttagtgc gtcttttgct aggtgatttt atatggtttt | gttttgctat taaatattta aggggggggg ttttcagcct ggtcttgttt gtttccattg tgttttgtgg gtcttgtgt tgatttgagg | atgtgtgtct ttttatccat ttattaagaa tcttctcttc | ttataagtga tcagagccac gtaaggatat cttcttcat tccttccttt | aaaattgatt aaaaaaaaaa aatgtgtttc tctgtgtctt gttctgccat tccttcattt ttattttta attatcttac | 2220 2280 2312 60 120 180 240 300 |
| ttgctttcc gttaaaagtt aaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 gactttttt ttgtagacaa ttgatttgag tgtattgtt ctttattga ggtatatgty aacctattat | tttgctatat ttgttctgaa aaaaaaaaaa sapiens catctgctta cagataattg agtttagtgc gtcttttgct aggtgattt atatggttt tttaagctga | gttttgctat taaatattta aggggggggg ttttcagcct ggtcttgttt gtttccattg tgttttgtgg gtcttgtgt tgatttgagg taaccactta | atgtgtgtct ttttatccat ttattaagaa tcttctcttc | ttataagtga tcagagccac gtaaggatat cttcttcat tcttgcaaat ggcaaaaaca | aaaattgatt aaaaaaaaaa aatgtgtttc tctgtgtctt gttctgccat tccttcattt ttattttta attatcttac cacagaggca | 2220 2280 2312 60 120 180 240 300 360 |
| ttgctttcc gttaaaagtt aaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 gactttttt ttgtagacaa ttgatttgag tgtattgtt ctttattga ggtatatgty aacctattat aaaagaaaac | tttgctatat ttgttctgaa aaaaaaaaaa sapiens catctgctta cagataattg agtttagtgc gtcttttgct aggtgatttt atatggtttt tttaagctga caataaaagc | gttttgctat taaatattta aggggggggg ttttcagcct ggtcttgttt gtttccattg tgttttgtgg gtcttgtggt tgatttgagg taaccactta tctacacttt | atgtgtgtct ttttatccat ttattaagaa tcttctcttc | ttataagtga ttataagtga tcagagccac gtaaggatat ctttcttcat tcttccttt tcttgcaaat ggcaaaaaca tttttaactt | aaaattgatt aaaaaaaaaa aatgtgtttc tctgtgtctt gttctgccat tccttcattt ttattttta attatcttac cacagaggca tttgttgtct | 2220 2280 2312 60 120 180 240 300 360 420 |
| ttgctttcc gttaaaagtt aaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 gactttttt ttgtagacaa ttgatttgag tgtattgtt ctttattga ggtatatgty aacctattat aaaagaaaac ctgtttatta | tttgctatat ttgttctgaa aaaaaaaaaa sapiens catctgctta cagataattg agtttagtgc gtcttttgct aggtgattt atatggtttt tttaagctga caataaaagc ctcattataa | gttttgctat taaatattta aggggggggg ttttcagcct ggtcttgttt gtttccattg tgttttgtgg gtcttgtggt tgatttgagg taaccactta tctacacttt tttctatgtc | atgtgtgtct ttttatccat ttattaagaa tcttctcttc | ttataagtga ttataagtga tcagagccac gtaaggatat ctttcttcat ttcttccttt tcttgcaaat ggcaaaaaca ttttaactt gtcattatta | aaaattgatt aaaaaaaaaa aatgtgtttc tctgtgtctt gttctgccat tccttcattt ttattttta attatcttac cacagaggca tttgttgtct gtttggttg | 2220 2280 2312 60 120 180 240 300 360 420 480 |
| ttgctttcc gttaaaagtt aaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 gactttttt ttgtagacaa ttgatttgag tgtattgtt ctttattga ggtatatgty aacctattat aaaagaaaac ctgtttatt | tttgctatat ttgttctgaa aaaaaaaaaa sapiens catctgctta cagataattg agtttagtgc gtcttttgct aggtgattt atatggtttt tttaagctga caataaaagc ctcattataa tagtctttct | gttttgctat taaatattta aggggggggg ttttcagcct ggtcttgttt gtttccattg tgttttgtgg gtcttgtgt tgatttgagg taaccactta tctacacttt tttctatgtc ccttaagatc | atgtgtgtct ttttatccat ttattaagaa tcttctcttc | ttataagtga ttataagtga tcagagccac gtaaggatat ctttcttcat tcttgcaaat ggcaaaaaca ttttaactt gtcattatta atatacaca | aaaattgatt aaaaaaaaaa aatgtgtttc tctgtgtctt gttctgccat tccttcattt ttattttta attatcttac cacagaggca tttgttgtct gtttggttg tttacagtgt | 2220 2280 2312 60 120 180 240 300 360 420 480 540 |
| ttgctttcc gttaaaagtt aaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 gactttttt ttgtagacaa ttgatttgag tgtattgtt ctttattga ggtatatgty aacctattat aaaagaaaac ctgtttatat gttcatcttt tataatatgc | tttgctatat ttgttctgaa aaaaaaaaaa sapiens catctgctta cagataattg agtttagtgc gtcttttgct aggtgattt atatggttt tttaagctga caataaaagc ctcattataa tagtctttct tgcattttt | gttttgctat taaatattta aggggggggg ttttcagcct ggtcttgtt gtttccattg tgttttgtgg tgtttgtgg taaccactta tctacacttt tttctatgtc ccttaagatc tgtgtactta | atgtgtgtct ttttatccat ttattaagaa tcttctcttc | ttataagtga ttataagtga tcagagccac gtaaggatat ctttcttcat tcttgcaaat ggcaaaaaca tttttaactt gtcattatta atatatcaca tgagttttgg | aaaattgatt aaaaaaaaaa aatgtgtttc tctgtgtctt gttctgccat tccttcattt ttattttta attatcttac cacagaggca tttgttgtct gtttggttg tttacagtgt accttcagtt | 2220 2280 2312 60 120 180 240 300 360 420 480 540 600 |
| ttgctttcc gttaaaagtt aaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 gactttttt ttgtagacaa ttgatttgag tgtattgtt ctttattga ggtatatgty aacctattat aaaagaaaac ctgtttatat gttcatctt tataatatgc gattctta | tttgctatat ttgttctgaa aaaaaaaaaa sapiens catctgctta cagataattg agtttagtgc gtcttttgct aggtgattt atatggtttt tttaagctga caataaaagc ctcattataa tagtctttct tgcattttt tactcatcaa | gttttgctat taaatattta aggggggggg ttttcagct ggtcttgtt gtttccattg tgttttgtgg tgatttgagg taaccactta tctacacttt tttctatgtc ccttaagatc tgtgtactta cttcctttc | atgtgtgtct ttttatccat ttattaagaa tcttctcttc | ttataagtga ttataagtga tcagagccac gtaaggatat ctttcttcat tcttccttt tcttgcaaat ggcaaaaaca tttttaactt gtcattatta atatatcaca tgagttttgg aaaaactccc | aaaattgatt aaaaaaaaaa aatgtgtttc tctgtgtctt gttctgccat tccttcattt ttattttta attatcttac cacagaggca tttgttgtct gttttggttg tttacagtgt accttcagtt aggctggaca | 2220 2280 2312 60 120 180 240 300 360 420 480 540 600 660 |
| ttgctttcc gttaaaagtt aaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 gactttttt ttgtagacaa ttgatttgag tgtattgtt ctttattga ggtatatgty aacctattat aaagaaaac ctgtttatat gttcatctt tataatatgc gattcttat cqgtqqccaa | tttgctatat ttgttctgaa aaaaaaaaaa sapiens catctgctta cagataattg agtttagtgc gtcttttgct aggtgattt tttaagctga caataaaagc ctcattataa tagtctttct tgcattttt tactcatcaa tgcctgtaat | gttttgctat taaatattta aggggggggg ttttcagct ggtcttgtt gtttccattg tgttttgtgg tgatttgagg taaccactta tctacacttt tttctatgtc ccttaagatc tgtgtactta cttcctttc cccagcacty | atgtgtgtct ttttatccat ttattaagaa tcttctcttc | ttataagtga ttataagtga tcagagccac gtaaggatat ctttcttcat tcttccttt tcttgcaaat ggcaaaaaca tttttaactt gtcattatta atatatcaca tgagttttgg aaaaactccc aggtgggctg | aaaattgatt aaaaaaaaaa aatgtgtttc tctgtgtctt gttctgccat tccttcattt ttattttta attatcttac cacagaggca tttgttgtct gttttggttg tttacagtgt accttcagtt aggctggaca atcccttgag | 2220 2280 2312 60 120 180 240 300 360 420 480 540 600 660 720 780 |
| ttgctttcc gttaaaagtt aaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 gactttttt ttgtagacaa ttgatttgat tctttattga ggtatatgtt cttttattga ggtatatgty aacctattat aaagaaaac ctgtttatat gttcatctt tataatatgc gattcttat cggtggccca gtcaggagtt | tttgctatat ttgttctgaa aaaaaaaaaa sapiens catctgctta cagataattg agtttagtgc gtcttttgct aggtgattt tttaagctga caataaaagc ctcattataa tagtctttct tgcattttt tactcatcaa tgcctgtaat cgagaccatc | gttttgctat taaatattta aggggggggg ttttcagcct ggtcttgttt gtttccattg tgttttgtgg tgatttgagg taaccactta tctacacttt tttctatgtc ccttaagatc tgtgtactta cttcctttc cctagcacty ctggaaaatg | atgtgtgtct ttttatccat ttattaagaa tcttctcttc | ttataagtga ttataagtga tcagagccac gtaaggatat cttcttcat tcttccttt tcttgcaaat ggcaaaaaca tttttaactt gtcattatta atatatcaca tgagttttgg aaaactccc aggtgggctg ccatctgtwc | aaaattgatt aaaaaaaaaa aatgtgtttc tctgtgtctt gttctgccat tccttcattt ttattttta attatcttac cacagaggca tttgttgtct gttttggttg tttacagtgt accttcagtt aggctggaca atcccttgag taaaaatata | 2220 2280 2312 60 120 180 240 300 360 420 480 540 600 660 720 780 840 |
| ttgctttcc gttaaaagtt aaaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 gactttttt ttgtagacaa ttgatttgat tgtattgtt cttttattga ggtatatgty aacctattat aaagaaaac ctgtttatat gttcatctt tataatatgc gattcttat cggtggccaa gtcaggagtt aaaaattagt | tttgctatat ttgttctgaa aaaaaaaaaa sapiens catctgctta cagataattg agtttagtgc gtcttttgct aggtgattt tttaagctga caataaaagc ctcattataa tagtctttct tgcattttt tactcatcaa tgcctgtaat cgagaccatc ttggtgttgt | gttttgctat taaatattta aggggggggg ttttcagcct ggtcttgttt gtttccattg tgttttgtgg tgatttgagg taaccactta tctacacttt tttctatgtc ccttaagatc tgtgtactta cttccttttc cccagcacty ctggaaaatg ggcgagcacc | atgtgtgtct ttttatccat ttattaagaa tcttctcttc | ttataagtga ttataagtga tcagagccac gtaaggatat cttcttcat tcttgcaaat ggcaaaaaca ttttaactt gtcattatta atatatcaca tgagttttgg aaaaactccc aggtgggctg ccatctgtwc gctacctgtwc | aaaattgatt aaaaaaaaa aatgtgtttc tctgtgtctt gttctgccat tccttcattt ttattttta attatcttac cacagaggca tttgttgtct gtttggttg tttacagtgt accttcagtt aggctggaca atcccttgag taaaaatata aggctgaggc | 2220 2280 2312 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| ttgctttcc gttaaaagtt aaaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 gactttttt ttgtagacaa ttgatttgag tgtattgtt cttttattga ggtatatgty aacctattat aaagaaaac ctgtttatat gttcatctt tataatatgc gatttcttat cggtggccaa gtcaggagtt aaaaattagt aagagatcgc | tttgctatat ttgttctgaa aaaaaaaaaa sapiens catctgctta cagataattg agtttagtgc gtcttttgct aggtgattt tttaagctga caataaaagc ctcattataa tagtctttct tgcattttt tactcatcaa tgcctgtaat cgagaccatc tgggtgttgt ttgaacccgg | gttttgctat taaatattta aggggggggg ttttcagcct ggtcttgttt gtttccattg tgttttgtgg tgatttgagg taaccactta tctacacttt tttctatgtc ccttaagatc tgtgtactta cttcttttc cctagcacty ctggaaaatg ggcgagcacc gagacgaagg | atgtgtgtct ttttatccat ttattaagaa tcttctctc atgatttaat ttatgatgag acattgcata agcctcttgc ttgaaaagtt agagtattt ctattaccag ttctgattg tgggaggctg tggcaaagct tggcaaagct | ttataagtga ttataagtga tcagagccac gtaaggatat cttcttcat tcttccttt tcttgcaaat ggcaaaaaca ttttaactt gtcattatta atatatcaca tgagttttgg aaaaactccc aggtgggctg ccatctgtwc gctacctgtwc | aaaattgatt aaaaaaaaa aatgtgtttc tctgtgtctt gttctgccat tccttcattt ttattttta attatcttac cacagaggca tttgttgtct gtttggttg tttacagtgt accttcagtt aggctggaca atcccttgag taaaaatata aggctgaggc accgctgtac | 2220 2280 2312 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 |
| ttgctttcc gttaaaagtt aaaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 gactttttt ttgtagacaa ttgatttgat tgtattgtt ctttattga ggtatatgty aacctattat aaaagaaaac ctgttatat gttcatcttt tataatatgc gatttcttat cggtggcca gtcaggagtt aaaaattagt aggagatcctg | tttgctatat ttgttctgaa aaaaaaaaaa sapiens catctgctta cagataattg agtttagtgc gtcttttgct aggtgattt ttaagctga caataaaagc ctcattataa tagtctttct tgcattttt tactcatcaa tgcctgtaat cgagaccatc tgggtgttgt ttgaacccgg ggtgacagag | ttttcagcct ggtcttgttt ggtcttgttt gtttccattg tgttttgtgg gtcttgtgg tatttgagg taaccactta tctacactt tttctatgtc ccttaagatc tgtgtactta cttcttttc cccagcacty ctggaaaatg ggcgagcacc gagacgaagg cgagacgca | atgtgtgtct ttttatccat ttattaagaa tcttctcttc | ttataagtga ttataagtga tcagagccac gtaaggatat cttcttcat tcttccttt tcttgcaaat ggcaaaaaca ttttaactt gtcattatta atatatcaca tgagttttgg aaaaactccc aggtgggctg ccatctgtwc gctacctgtwc | aaaattgatt aaaaaaaaa aatgtgtttc tctgtgtctt gttctgccat tccttcattt ttattttta attatcttac cacagaggca tttgttgtct gtttggttg tttacagtgt accttcagtt aggctggaca atcccttgag taaaaatata aggctgaggc accgctgtac | 2220 2280 2312 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 |
| ttgctttcc gttaaaagtt aaaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 gactttttt ttgtagacaa ttgatttgat tgtattgtt ctttattga ggtatatgty aacctattat aaaagaaaac ctgttatat gttcatcttt tataatatgc gatttcttat cggtggcca gtcaggagtt aaaaattagt aggagatcctg | tttgctatat ttgttctgaa aaaaaaaaaa sapiens catctgctta cagataattg agtttagtgc gtcttttgct aggtgattt tttaagctga caataaaagc ctcattataa tagtctttct tgcattttt tactcatcaa tgcctgtaat cgagaccatc tgggtgttgt ttgaacccgg | ttttcagcct ggtcttgttt ggtcttgttt gtttccattg tgttttgtgg gtcttgtgg tatttgagg taaccactta tctacactt tttctatgtc ccttaagatc tgtgtactta cttcttttc cccagcacty ctggaaaatg ggcgagcacc gagacgaagg cgagacgca | atgtgtgtct ttttatccat ttattaagaa tcttctcttc | ttataagtga ttataagtga tcagagccac gtaaggatat cttcttcat tcttccttt tcttgcaaat ggcaaaaaca ttttaactt gtcattatta atatatcaca tgagttttgg aaaaactccc aggtgggctg ccatctgtwc gctacctgtwc | aaaattgatt aaaaaaaaa aatgtgtttc tctgtgtctt gttctgccat tccttcattt ttattttta attatcttac cacagaggca tttgttgtct gtttggttg tttacagtgt accttcagtt aggctggaca atcccttgag taaaaatata aggctgaggc accgctgtac | 2220 2280 2312 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 |
| ttgctttcc gttaaaagtt aaaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 gactttttt ttgtagacaa ttgatttgat tgatttgat gttattgtt ctttattg ggtatatgty aacctattat aaaagaaaac ctgtttatat gttcatctt tataatatgc gatttcttat cggtggcca gtcaggagtt aaaaattagt aggagatcgc tccagtcctg aaaaaaaaaa | tttgctatat ttgttctgaa aaaaaaaaaa sapiens catctgctta cagataattg agtttagtgc gtcttttgct aggtgattt tttaagctga caataaaagc ctcattataa tagtcttct tgcattttt tactcatcaa tgcctgtaat cgagaccatc tgggtgttgt ttgaacccgg ggtgacagag aaaaaaaaaa | ttttcagcct ggtcttgttt ggtcttgttt gtttccattg tgttttgtgg gtcttgtgg tatttgagg taaccactta tctacactt tttctatgtc ccttaagatc tgtgtactta cttcttttc cccagcacty ctggaaaatg ggcgagcacc gagacgaagg cgagacgca | atgtgtgtct ttttatccat ttattaagaa tcttctcttc | ttataagtga ttataagtga tcagagccac gtaaggatat cttcttcat tcttccttt tcttgcaaat ggcaaaaaca ttttaactt gtcattatta atatatcaca tgagttttgg aaaaactccc aggtgggctg ccatctgtwc gctacctgtwc | aaaattgatt aaaaaaaaa aatgtgtttc tctgtgtctt gttctgccat tccttcattt ttattttta attatcttac cacagaggca tttgttgtct gtttggttg tttacagtgt accttcagtt aggctggaca atcccttgag taaaaatata aggctgaggc accgctgtac | 2220 2280 2312 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 |
| ttgctttcc gttaaaagtt aaaaaaaaaa <210> 1118 <211> 1058 <212> DNA <213> Homo <400> 1118 gactttttt ttgtagacaa ttgatttgat tgtattgtt ctttattga ggtatatgty aacctattat aaaagaaaac ctgttatat gttcatcttt tataatatgc gatttcttat cggtggcca gtcaggagtt aaaaattagt aggagatcctg | tttgctatat ttgttctgaa aaaaaaaaaa sapiens catctgctta cagataattg agtttagtgc gtcttttgct aggtgattt tttaagctga caataaaagc ctcattataa tagtcttct tgcattttt tactcatcaa tgcctgtaat cgagaccatc tgggtgttgt ttgaacccgg ggtgacagag aaaaaaaaaa | ttttcagcct ggtcttgttt ggtcttgttt gtttccattg tgttttgtgg gtcttgtgg tatttgagg taaccactta tctacactt tttctatgtc ccttaagatc tgtgtactta cttcttttc cccagcacty ctggaaaatg ggcgagcacc gagacgaagg cgagacgca | atgtgtgtct ttttatccat ttattaagaa tcttctcttc | ttataagtga ttataagtga tcagagccac gtaaggatat cttcttcat tcttccttt tcttgcaaat ggcaaaaaca ttttaactt gtcattatta atatatcaca tgagttttgg aaaaactccc aggtgggctg ccatctgtwc gctacctgtwc | aaaattgatt aaaaaaaaa aatgtgtttc tctgtgtctt gttctgccat tccttcattt ttattttta attatcttac cacagaggca tttgttgtct gtttggttg tttacagtgt accttcagtt aggctggaca atcccttgag taaaaatata aggctgaggc accgctgtac | 2220 2280 2312 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 |

```
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (334)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1885)
<223> n equals a,t,g, or c
<400> 1119
aggccaggca gcccgctatc cttggatggc ctttccacgc aatagcatca tgcacttgaa
                                                                       60
ccacacagca aaccccacct caaatagtaa tttcttggac ttgaatctcc cgccacagca
                                                                      120
caacacaggt ctgggaggga tccctgtagc aggtattcca gcgtcttcag gaaacagttt
                                                                      180
agactetett caagatgaca ateeteeaca etggetaaaa teeetteagg eeeteacaga
                                                                      240
                                                                      300
gatggacggc cccagcgctg ctccatcaca gacccaccac agcgccccct tcagcrcaca
gatcccgctg cacagagcca gttggaatcc ctancctcct ccttcaaacc cttccagctt
                                                                      360
ccactcccca ccccaggct ttcaracggc cttcagaccc cccagcaaaa cccccacaga
                                                                      420
                                                                      480
tttactacag agttcaacac tggaccgcca ttaggcawag aggagcaacc attakaaaat
                                                                      540
gcaggatttg tcccactctk ttttctccct ctcagcccac cacccacagc tcccttctca
                                                                      600
tctcttatgt tctgaagaat ccagtacctg atcaattttt tttctcccta accccagatg
caatgcgatc acagggtcat taccatctct ttattaattg taaaaatttt tgttgatcca
                                                                      660
gcatttgagt gacactgttg aatgtttcta aaaatgcctt tttaaggaga gaaaaaaaa
                                                                      720
tcaaagggca gtctcaatac ttagaaaatt attgtttgtc tgttgcgcat aataatgaca
                                                                      780
taatctgctt agcagaaaat gacgattaat ctataggaaa gctcaagtaa atgcattatc
                                                                      840
aactgcagaa gtttgaaaac caggttcatt tacgtgagat tgctaaatgc atgggggaaa
                                                                      900
gcagtggtcc tagcatccat cttgtattca gcttatcatt attgcaggga aaatgctttt
                                                                      960
aatttaaatt aatttttaat tettttggea agttgatgge aaggaettga ttgtgteatt
                                                                      1020
aagcaaaaga atgtattgga agttgatgga aagacaaatt catctgtagt agtaactggc
                                                                      1080
cgattgctaa agagttcata aggaggtgag aagtaatttt tttaaaggag aaaaattttt
                                                                      1140
tggctttaga tttaaagtaa attgaaatgt tttaaagaaa aaagtattca cagatttaat
                                                                      1200
acctattaat aatataagag ctgaaatgta agtcatttct tcagtccttc tcctctgtcg
                                                                      1260
                                                                      1320
gaatcttttt tgttttacca taaattcacc tgacgagggc actctgagat agcactgctc
                                                                      1380
tggggccatc tgatcaccat cgggagcaaa tctctgacct ccttgcctgc agcttttact
                                                                      1440
taaccctgta gtttctggac gtttgtgcag tattgaaaag acaggagaaa agaaaacaga
aacctggtta taacctgacg ctaaaactaa aaacaaggaa atgtacctct ttcttcagaa
                                                                      1500
                                                                      1560
ttaaaactaa aatcttaaat aaaacagaaa acttgatgat gacacttggg ttgtccttgt
ttttgttttt ctgttttgtt ggatgtgagt ttgaaaggtt ttgtgacaag tagccatcag
                                                                      1620
                                                                      1680
atgtttccat ttgattttac atcttcaaca gtggggaggg aggatggttt agaagaagaa
                                                                      1740
agtggrggag aaacaaccat tttattgaca gycaatggca tccttgacgt tcagcccatc
                                                                      1800
ttgtcctcaa gaatccctct tccagtgcct ttcagtagaa gattcctctt tctgctattg
tattatgcat gccaagcctt cyyaactgag aagccytatg ygccagtaat ggagaggtta
                                                                      1860
                                                                      1920
ttgacatgtt gagatgttgg ttctntttag ggagacctgg caggagcagc agtcactatg
                                                                      1980
tcacacaagt gacatctctt tgtgagtgcc atgatgggaa agagatcggg aaacactgat
                                                                      2040
gtagatgatc cacagacaca tcttttatga ctgaccattt taggaagtac ctgatgatgg
                                                                      2100
ggcaacgatc gcaccactga ccaaaagagg gtagaggatg aaagttacct gttccccaac
                                                                      2160
agagcaccag gatctgtgtg gtttgtatgt cttgccttgg gctgcattca gaagcccaaa
                                                                      2220
gctggaactg gcatattttc agccatgtcc attaagggat gtgatgtagg atcaactaaa
                                                                      2280
tagatctaga tcgtacgttc tgtgctttca ggtgggtttt tttcgtcctt acctttatgc
                                                                      2340
tgtactttaa tttgttaaaa tttcaacaca atttttagaa acttaaacat gatattctca
                                                                      2400
aataaatgtc accagaaata gatggtgatc aagtggatag taaattgttt tgtaaaactw
                                                                      2460
acaaaatttc cctggataag aggagaggac tagaaatgac aggctctctt tgcccttgaa
                                                                      2520
cttcacttca gtctcctgaa ccttcacatt gtactgcaaa gtgatggacc aatgcacaaa
taatattcag atggcagtga attgtaatca aggctttttg cggggatgcg gggaagtcct
                                                                      2580
                                                                      2640
gakatggggc atatcaataa aaatgttgct ttttttgtaa aaggagggaa ctcctacctt
                                                                      2700
ataaggctgt gctgtaattg tgtgtgtgtt taatcagtca tacagaagag tttataaaaa
                                                                      2732
gcatgacttt ataaaaagta tgaagaataa aa
```

```
<210> 1120
<211> 372
<212> DNA
<213> Homo sapiens
<400> 1120
                                                                       60
ccacgcgtcc ggtgaacaca gagaaatgaa tttattcccc atatgggtat gtttgccccc
tggcaatgca tttccatact ctttaacttg gggactgaaa tgttataaat tgacagttct
                                                                      120
                                                                      180
actcagaaga cctttcaagc atcttgtgtt tatgagaata caggggcatc tgcggaatga
                                                                      240
attcgaacac atggatgaat taaatttgaa aacacacaga ccgagaggca gacagttcct
                                                                      300
aggctgtggt cgttgcatgg attttacaaa actgttaacc tacacctttg gctttgctgt
                                                                      360
gttcattgtc ctggggaaga attgtgggtt taagaattac tctttgatta aactacttaa
                                                                      372
aaaaaaaaa aa
<210> 1121
<211> 2043
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (308)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1672)
<223> n equals a,t,g, or c
<400> 1121
gtgcatctac agggtatgtg tttaaatgag gggtagttga cccacataac tccccaccct
                                                                       60
cctgcctcat ggttagaatg tatgttcatt ggggattctg catacatttt catcacatat
                                                                      120
ctacttttct ggcttttaag taatatcctc tcctttgttt ttgccaacag tgttcatgaa
                                                                      180
tagtgaatgt aggaaagcat tatcattgct atgttttatt ttcacactgt atctcagtat
                                                                      240
cagcccatac tttcaatgta ctaacaactg tcactgaggc aaaaagtttt aattaagctc
                                                                      300
                                                                      360
acacatgnat tattttccag caaacagagc ctaattgatg aaattgctaa ctgtacttcc
                                                                       420
aggtgcagtc agtagccagt agtgcatgtt agtatgcaat atggcatggg ctgttacatg
                                                                       480
gtgtgatact agattatata tttactatga acgtatgtat tgttctttaa tgacatctaw
ttgktcattc caaaaatatt tattgagcac ggactctgtg ccagttatta gttagagtaa
                                                                      540
                                                                       600
taatagctgc tgtggcaaat gaatttcctc acctaagaaa aataaaagtt aattattttt
tctccacata aaggtctaga atgttctgcc gcatgccttc catgtcatga ttcagggacc
                                                                       660
caggeteett ceatettgtg getgeeceat ceactaagtt eteagaetet tteattteea
                                                                      720
actggtggtt gttgaaagag aaggtgatga aggtgtaccc cacttacatc ttacccactt
                                                                       780
                                                                       840
tcacctaraa gtggcacata tcacttttat tgacgtttca ttagcaagaa ttgtcctgca
acacacttgg aggaaggcag ctgggaaatg ctgtccctgg ctgtgcacag ggacatatgt
                                                                       900
attttatgta ttttatgaga ctctttgcag gatagctggc tatctctgcc acagctggcc
                                                                       960
                                                                      1020
atgtctgcca tggctagaca tcatttcagg ctctagggaa atagcagtga agagaaacag
                                                                      1080
acaaaaatat ctgacctcat ggagcataaa ttcttgaatt aaaattctta aattcttcat
                                                                      1140
gggatgagac agacaataac caggctaaat cagtatgttg caaagcagtg agagctgcta
                                                                      1200
aaactaagca gaaaaagggg tacaaagcat gagagagaag gatttgagat gagatagtgt
ggtcatagaa armcacactt tcwatcagca tgagagaaaa gctaaagcag gaaaaggggt
                                                                      1260
                                                                      1320
agaaagcatg agagaaaggt ttgagatgag ttagtgtgct catagaaagc gtcttgaaag
                                                                      1380
aaatgatatt ttaagtaaag aatcagagag cataaggtgt ccaactaggt gaatatctaa
                                                                      1440
agcaaaaaca ttccagatgg agagaatagc aggtaaaagg actctgaagc tggtgaagat
                                                                      1500
aataagggtg agaataatag aaggtgagat cggagaggca atcgtcaggc cagactgtgt
                                                                      1560
cgggccattt aggtcatagt aaaaatctgg gctttttttt ttgtttttt ttttgttttt
gtaactaact ttattgaact atgattttca taaaatatac ccattcggta ggttttaaaa
                                                                      1620
                                                                      1680
atgtagactg aagacattca tataatcacc actacaataa aaatatagaa cntttttatc
                                                                      1740
atcccctaaa gtatccctat ttatagttca tacctggccc cagcaatcac tgatatgcca
                                                                      1800
tcacagatta gtttgttttt tctaggattt catacaaatg gaaaggaaca gtatgtactc
ttctgtgtct gtattctgtc actcaacata atgcttttga gattcattca tattgttgtc
                                                                      1860
```

```
agtatcacta ctttattct atttactgcc attatatgaa ttctattatg tggatatacc
                                                                     1920
                                                                     1980
ataatttatt taatctttca cctactgaga ggcatttgag ttgttgataa tttggggctg
                                                                     2040
ctatgaataa atctgctatg aacataaaaa aaaaaaaaa aaaaaaaaa aaaaagggcg
                                                                     2043
gcc
<210> 1122
<211> 1557
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1557)
<223> n equals a,t,g, or c
<400> 1122
atcccatgag cgctgcttac tgttgaatac caaggtctag ggctctgctt cctgtagaca
                                                                       60
                                                                      120
cgcacacgtt gtctccatcc aatggccttt tctgaagtta cagaaaacac caacatggga
                                                                      180
gggagtttat gaagcaaagg caaaggcaac acgtcggcta gcttcaggrt agcaccgtga
                                                                      240
qaaatqqqct qtattqatac tgtgaatgtt tgttttccaa gctgttttat acaggtttgt
                                                                      300
tttttcatgg tgtagggtat ttatgacaaa gtaaatgttg tgaaggttaa agataaatta
agattateca ccaaatgeta aaaataetga tgtgtaaate acetttateg ceteacetet
                                                                      360
                                                                      420
tctacaagct tttgtggctt gagggctttt gttttttggct tttgtctgga tgaaagtttt
                                                                      480
gcccagttgt gttttaaaaa caattcctca tgaacactaa gattaattgt gtctgtatct
                                                                      540
ctqqaactqq gtgctcatgt tggttttaat gagcttgcaa cccttccccq tttgctttgt
                                                                      600
ttaaggaggt gcctctgttc tttgtggagg agtgaaatgg agctttaagt gtgtgtgtgt
gttatgtgtg tttgcacaca cgcgtgtgtt attgtagcaa taacaaaaag tagccatctc
                                                                      660
cttgttccag ctgaaaacct gctgtgagag ttttgacaga gcactttatt ttcgtcaagt
                                                                      720
ttcaagtctg agttcaaaac cagccctgat cccttatgac caactgctac tcgaccagtc
                                                                      780
gccactcagt ggccacctgg tgcccgttta gatttttgct tgggttttac tggccacctc
                                                                      840
tatagacgag agttgcaaag ttgctttgag cagagaggga aagattaatt tacactgctg
                                                                      900
gccaccgaag caggtgtttc ctgggtagta atctcacggc tcttgatctg gaaacttcag
                                                                      960
                                                                     1020
agtacaaatt ggtggatggt ggaaggcagg acacgtatct ctgtctgacg gaaaacagac
ctcggggctg gcgtaaaccc tgctgccagg ccctctcccc actgccccaa accggcctag
                                                                     1080
acacgaagac caaagcagcc tgcacagggc aaggcccccg cggaatcctg cagagcaaac
                                                                     1140
                                                                     1200
tcaggttamc ttgggtccat gaccgtttgc attcgaaaca caatacactg cctcgttctc
tcagttagca gctgggcagc agcgcaccat tcatcattta ggcttgtggt ttgttgttta
                                                                     1260
ctctaccaat gttatgtyga aactgcattg taaaaagaga agaaaatggc aggttttcca
                                                                     1320
                                                                     1380
ggtccacgga aaggtttggc ctgacgctgg agtgcggtga tgaacttacg tgacaatgat
tgtattcctc agtagcactt taaacgccga agacagccct gcagcaagcc tgcacacggg
                                                                     1440
                                                                     1500
cttgggtggg ttcctttgga gaagatgtgg ctggaacaca aacaatcttt gaaagaaata
                                                                     1557
aatgtgcaca cagaacamwa aaaaaaaaaa aaaaaaaaa aaaaaaaa aaaaatn
<210> 1123
<211> 1699
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (2)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (26)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (28)
```

```
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (56)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (62)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1239)
<223> n equals a,t,g, or c
<400> 1123
                                                                       60
gnaccggata ccattttcac acaggnanca gctatgacca tgattacgcc aagctntaat
                                                                      120
anggactcac tataggaaag ctggtacgcc tgcaggtacc ggtccggaat tcccgggtcg
                                                                      180
gacccacgcg tccggcgagg ctgggttacg tgaggaagct gggggtttcg cgggcagctt
                                                                      240
tagagcccca gtcagggaaa ccgaggccgg gcttcctggc tgcctcgcga gcctcttcat
                                                                      300
ggctctcgcc gccgccctga ggtgcctaga atgggttccg gcctccgggg aggttcccag
                                                                      360
taaccgcagg agccaccatt gatttggcgt ctgctgggtg caaagcccag cgcgctaacc
                                                                      420
ctttactcgc gacctttcgc ttcaccttca cagcagccct gcgaggagag ttgtggactg
gggcaacctt tgccagtgat gagaagtgat gctcgtggca gtgctgaatc tctctgaata
                                                                      480
                                                                      540
tgattcgaat tgcagcctta aatgccagct ccaccattga ggatgatcat gaaggaagct
                                                                      600
ttaaaagtca caaaacccag acaaaggagg ctcaggaagc agaggctttt gcattgtacc
                                                                      660
acaaggeeet tgatetgeag aaacatgace ggtttgagga gtetgeeaaa geetaceatg
                                                                      720
agctcttgga ggcgagcctg ctgcgggagg cagtttcatc cggtgatgag aaagaggggt
                                                                      780
tgaaacaccc tgggctgata ctgaaatatt ccacttataa gaacttggcc cagctggcag
cccagcggga ggatctggag acagccatgg agttctactt agaggcagtg atgctggact
                                                                      840
ccacagatgt caacctctgg tataagattg gacatgtggc cctgaggctc atccggatcc
                                                                      900
ccctggctcg ccatgctttt gaggaagggc tgcggtgcaa tcctgaccac tggccctgtt
                                                                      960
tggataacct aatcactgtc ctgtacaccc tcagtgatta cacaacatgt ctgtacttca
                                                                     1020
                                                                     1080
tctgcaaagc tttggagaag gattgccggt acagcaaagg gctggtcctc aaggagaaga
                                                                     1140
tttttgagga gcagccttgt ctccggaagg actctctcag aatgttcctc aaatgtgaca
tgtcgattca cgatgtttcg gtgagtgcag ctgagacaca ggcgattgta gatgaggcct
                                                                     1200
tggggctgcg aaaaaagagg caagcrctga ttgtrmggna gaaggagccg gacctgaaac
                                                                     1260
                                                                     1320
ttgtgcagcc cattcctttc ttcacctgga agtgcctcgg agagagcttg ctggccatgt
acaatcatct caccacctgt gagcccccac gtcccagcct tggcaaaagg attgatttgt
                                                                     1380
                                                                     1440
cggactacca ggaccccagc cagcctcttg agtcctccat ggtggtgacg ccagttaacg
tgatccagcc aagcactgtc agcaccaacc cagctgtggc tgtcgccgag cctgtggtct
                                                                     1500
cctacacctc tgtggctaca accagcttcc cactgcacag tcctggtctg ttggagacag
                                                                     1560
gcgctcctgt gggtgatatt tctgggggag ataaatccaa gaaaggggta aaacggaaga
                                                                     1620
agatttcaga agagagtgga gaaacagcaa agcggcggtc tgcccgtgtc cgaaacacca
                                                                     1680
                                                                     1699
agtgcaaaaa aaaaaaaaa
<210> 1124
<211> 1796
<212> DNA
<213> Homo sapiens
<400> 1124
                                                                       60
ggggacccaa gatggactgc ctgtattgct tccaggataa agtccaattt ctagctctgg
tttttataac cttgcttcag ctcacctttt ccgtcatcat cccctccatc tcctccca
                                                                      120
cgctgggaaa tggatggctg cactatactg tgtgatgtta ttgctatgtt catgccatcc
                                                                      180
                                                                      240
cctctgcctg gaatgccctt ctgcatgaat gcctgtgaaa tgttgttgct cctttgtatg
                                                                      300
gcctggcttc cgtggttggc aggaatctct tctttcgtgg tattcctgtc atctttgtgc
                                                                      360
atcacagtca gctttgtatt cctagcttgt aagctacttg aggataaggg catgtctgaa
tctatttaat ctctttgcac ctgtttgggc aattgatgtt ttaaatattt aaataactaa
                                                                      420
```

<211> 1328 <212> DNA

<213> Homo sapiens

```
actctctcta cagtacatac tcacttttga tttatgaatt ggcaaaattc aacttttttc
                                                                      480
cttgaatatt cttaaactga gatgaattcc aaaggagagt gttctgtgtg tggccttcat
                                                                      540
tgagtggttt tctgttacca gaaagctctt ggtggccttc ctcttccctg gtgtcaaggt
                                                                      600
tgactgttat aggaaatggg aggggagagg gccgtttctg ccacgcattg tcctaggttc
                                                                      660
ttaacattat ttaatcctta taatgcaatg tatcctcatt ttacagatga aacctgagac
                                                                      720
caaagaacat gtaacacata aagtacattg cagagttagg atgtgaaccc aactctgatt
                                                                      780
                                                                      840
ctaaacctaa tgctctcact ctttcattca gaggttcagt cagttctttg taggctgtag
atccagagaa gctgccgtag ccaacaatga agttgttagt ttttaaaaaca tctatgtggt
                                                                      900
                                                                      960
aagttggtct ggcacttaaa aatgtattgt ttcccaggca cggtggttca cacctgtaat
                                                                     1020
cccagcattt tgggaggccg aggcaggcgg atcattaggt caaaagattg agaccatcct
                                                                     1080
gaccaacatg gtgaaacccc gtctctacta aaagtacaaa aattagctgg gtgtggtggc
gcatgcctct agtcccagct acctgggagg ctgaggcagg agaattgctt gaacccagga
                                                                     1140
                                                                     1200
ggcagaggtt gcagtgagcc aagatcatgc tactgcacta cagcctggca acaaagcgag
                                                                     1260
actctgtcta aaatatatat atatatata attgtttact actcaccaca gatctgcagg
agttcactga tctctaggat ctgccttaac tccaacttac atgttttggt cactattaca
                                                                     1320
                                                                     1380
aactgtcatc ccagaatgat gctgcagagg ctagggctag gacacagacc agtgtttcca
                                                                     1440
tgtgggaatt ccctcccagt atttcttagg aaatgtatgt tttttgaatc cataatccct
                                                                     1500
agaaaaatca gttgaggaaa tgagaagtat tgtaattatt ctgtgaatag taacacttac
                                                                     1560
cattatggag acatcactag tttgaaagaa tccaacttca tcaaatatta acgtaccgag
ttgaaggcta caagaactga gacaggagca tagcagagag aaacggtcac catctcatta
                                                                     1620
gccctatttt tggttgttgt gatgccatta catctgtata tctggccata tcagctgcta
                                                                     1680
                                                                     1740
atggtgagtt cttgcaaaca aaatgatttg ataaacaacc taccatactt tatacaaatc
                                                                     1796
ttatggtgtt ccgagaaata aactttggaa gcaaaataaa aaaaaaaaa aaaaaa
<210> 1125
<211> 1535
<212> DNA
<213> Homo sapiens
<400> 1125
ggcacgagct ggggtaagtt tcccttgttc ctcaagtaag acaggatata ctttgcaata
                                                                       60
atctaaaaaa tctagatgtg acctggacaa agagagagag acaaagtata aaatgctttc
                                                                      120
ttagggataa ctcatactct tggtgacaag aaatgttaat ggtgtcctga aaccttttgg
                                                                      180
tcagtgattg ctccattatg tgggaaaaac ataggaaaat aaacatagga aaaacaaagg
                                                                      240
aaaataaaag actcatagta cttcaataaa agttgtcacc aaatcccaag aaaatgattg
                                                                      300
cattggaagg aatattcttt ttgttttaat tgatagtatt ttaggaagta gctaacactt
                                                                      360
gttcttattt cctagcttaa aaagtgaata tatgcacaca catatataac tagaaagtga
                                                                      420
tatattaaca ttttctatta acaagttttt tatctcataa aagatattct ttggctttcg
                                                                      480
aagagaagcc aaaataaata tcacataggc atttcagata tcccttcctt taaatgttta
                                                                      540
tagtgataca taaaatagaa attgcaaata tttgatattt taatattatt tttgctttac
                                                                      600
aatagcattt ttagtgctcc atttttaatt tattttatct ctccaggtta ataatctatc
                                                                      660
ataatgtcca aattacacag tattgtattg gtcagcttta agtgcccaga tcaatgacac
                                                                      720
tgaacctggc aaatgcaatg cacatgcaca acgcctagct tctaacatca tggctgttga
                                                                      780
aactgtctcc tctccaaagc attttcccag ccccatctct gccatttggg tctcatctga
                                                                      840
taaggtttaa ccatgagttg ttatactcca tgcatggcct ctggcatttg tgtgtattgt
                                                                      900
gattctaaac gtcaaatggt aaaggataac attagattat ttcgctttta ttttgacaga
                                                                      960
gttcaaatag caaaataaat tagatatact gtcacagctt aagaaattta aaatgaaata
                                                                      1020
tgttgtagtc aggtggaagt ttctgccggg gaaatattaa cacctaattt cccagaatac
                                                                     1080
                                                                      1140
ttatttcatg cattgcaaat atctatctcc tgtcatgaca ctgagatgaa aaggatcggt
taaaagtttg ctaactgaac tatttcccac agtgtaaata actaagtgtt ggtatagact
                                                                      1200
                                                                      1260
agtatggaaa catactaatt acactgggtg taagctatgt gagttgcctt atctttcac
                                                                      1320
ataacattta tatgtattgc atttcccata tcgtttcctt ttgttttgct gataacaact
                                                                      1380
aatgaggaaa agaaaggaag cattaaaaaa aaagaaaaaa aaagtcttcc aacaaaactg
                                                                      1440
ctagagagag aaagccaact attataaaat ataagcacaa ttctattgaa atatcagctc
                                                                      1500
cagattcaag taattttggg catgtgtatt atgtgccagg agatttcact tacatatgtt
                                                                      1535
atggaacgca gtgatttaaa aaacaaaaca aaaaa
<210> 1126
```

```
<400> 1126
                                                                      60
gctgcaggaa ttcggcacga ggtgacccag gcacatggtg caaacctagg acctccacct
                                                                     120
cccagetetg tagecagggg cageteacte caccetggte cetggagtgt gettacagge
                                                                     180
ttccgtgttg gggggctgcg aggcctgggc agcaaaccgc cttgtactgc ctctggcctg
tggatagtag atgctcaata aacctctcct tcctgtcaga aactcagtct ccctatgtgg
                                                                     240
atgacagcat tttcctaaag gatctaaagt tccatccacc ttaaactctg cctgaaggga
                                                                     300
agactatgaa actagaaaag aaaatggtgt ggatttgtgt gctactgcag acactgctgc
                                                                     360
gacatatatt aaggagcatg gaacggaacc gcgtggatga taaagtctgc gtggtgttta
                                                                     420
caaaggaata ttcataagca ctttctgaga agccccgtgc agctgctaac agtgactgcc
                                                                     480
                                                                     540
taggggaaaa tggacttgaa ggagtagagg ccaacttttc attttatacc tttctatact
                                                                     600
ttttaggact accacctatg tacgtgcatt ttatttttgt taaatgttcg caggggatat
                                                                     660
ctggcaggac aaggaactgg ctggaaaggg gcgcgaggag atcttctggg tgacggagat
                                                                     720
ccaggtggtg gttactcaga tgtattttat ccttcaatga gaagtttatt tcgaaaacgt
                                                                     780
cctgtgtctc ttccaaagat agctccagct gggcaaagtg gcagctctgt gggctccaac
                                                                     840
ggaagaggcc aaaaggccca tcctcctct gtccctggg ttcaattcac agccctgcct
                                                                     900
gtctctagct gtgtgatcct ggacgtgcct ctctgcttcc tcagctcctg cttcaagaca
                                                                     960
ggcctaacca aattttgaga agtccccagc agagctcccg accctaatca gagaagaaga
                                                                    1020
atgaatgttc tgagtgggta ccacatggca ggtgctattc taaatactga acagctgtga
acccatttaa tccccgtaag aaactggtga gcttggtttc atttgactca agaggcccag
                                                                    1080
                                                                    1140
agacgaaagc aactggtcca gggtcacaca gccagcagga agtggatcag ggttggaacc
                                                                    1200
tgggcagtct ggccctgaag cgctgcagaa agtattattt tgggagcaaa taggtaatag
                                                                    1260
gtggtgagag ccacctaaaa atacccctcc tctctggccc agtaaccact tctagaaatc
                                                                    1320
1328
aactcgag
<210> 1127
<211> 1232
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (22)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1227)
<223> n equals a,t,g, or c
<400> 1127
                                                                      60
ggaaggttaa gaaatggaat tnggggagca gctggcattc ctcgagctaa cgcttcacgc
                                                                     120
actaatttca gtagtcacac aaaccaatca ggtggtagtg aactcaggca aagggagggg
caacggtttg gagcagcaca tgtttgggaa aatggggcta gaagtaatgt tacagtgagg
                                                                     180
aatacaaacc aaagattaga gccaataaga ttacgatcta cttccaatag tcgaagccgt
                                                                     240
                                                                     300
tcaccaattc agagacagag tggcactgtt tatcataatt cccaaaggga aagtagacca
gtacagcaaa ccactagaag atctgttagg aggagaggta gaactcgagt ctttttagag
                                                                     360
caagatagag aacgagaacg cagaggtact gcatataccc cattctctaa ttcaaggctt
                                                                     420
                                                                     480
gtgtcaagaa taacagtaga agaaggagaa gaatccagca gatcctcaac tgctgtacga
cgacatccaa caatcacact ggaccttcaa gtgagaagga tccgtcctgg agaaaataga
                                                                     540
                                                                     600
gatcgggata gtattgcaaa tagaactcga tccagagtag ggctagcaga aaatacagtc
                                                                     660
actattgaaa gcaatagtgg gggctttcgc cgaaccattt ctcgtttaga gcggtcaggt
                                                                     720
attcgaacct atgttagtac cataacagtt cctcttcgta ggatttctga gaatgagctt
                                                                     780
gttgagccat catcagtggc tcttcggtca attttaaggc agatcatgac tgggtttgga
                                                                     840
gaactgagtt ctctaatgga ggccgattct gagtcagaac ttcaaagaaa tggccagcat
ttaccagaca tgcactcaga actgagtaac ttaggtacag ataacaacag gagccagcac
                                                                     900
agggaaggtt cctctcaaga caggcaggcc caaggagaca gcactgaaat gcatggtgaa
                                                                     960
                                                                    1020
aacgagacca cccagcctca tactcgaaac agtgacagta ggggtggcag gcagttgcga
                                                                    1080
aatccaaaca atttagttga aactggaaca ctacccattc ttcgccttgc tcactttttt
ttactaaatg aaagtgatga tgatgatcga atacgtggtt taaccaaaga gcagattgac
                                                                    1140
```

```
aatctttcca ccaggcacta tgagcataac agtattgata gtgaactagg taaaatctgt
                                                                    1200
agtgtttcts gkgccgaatt ctggaanccc gg
                                                                    1232
<210> 1128
<211> 557
<212> DNA
<213> Homo sapiens
<400> 1128
gaatteggea egaggaggae tggagagaea tggeagatge tacetgeaea ettttggtaa
                                                                     60
tattctgtgt gatgggatat gaaatggtcc atagaaaaaa accggaaaaa tacgccaagg
                                                                     120
ttaggttcat tctaagagtc taaaaatttc aaaaaccaaa acaacattat aaatggtgtt
                                                                     180
tctcaaggac ctttcactac ctttttagat tgtgcttgtg attttcaggc aagctaaatg
                                                                     240
totgatgaag actgototto ttttgttotg tgtotgacot actaattoot goccatgott
                                                                     300
caaactcagt tcagaaatca ctgaaggaac catccactgc cggcctgcct gcaaccacag
                                                                     360
ctgacagctg agttagttag gttttcctgt ccctattatt taccagtttg tactgaaatg
                                                                    420
ctttcatggg ctgtgcttcc agattatgag ttctgtggaa tcaggaagta tgtctctgta
                                                                    480
ttcttgtatt ctttggcttt tttgtgtagt aaagggactc aagtaatgtt aaaaaaaaa
                                                                    540
aaaaaaaaa actcgag
                                                                    557
<210> 1129
<211> 1320
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (3)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (52)
<223> n equals a,t,g, or c
<400> 1129
ncnaaattaa ccctcactaa agggaacaaa agctggagct ccaccgcggt gncgtccgct
                                                                     60
ctagaactag tggatccccc gggctgcagg aattcggcac gaggcacctt cttcaagatg
                                                                    120
gagctttttg aaggcatgcg agagagcacc aagatttcat ctctgttggc agaattggag
                                                                    180
gcaattcaaa gaaattcagc atcccaaaag agtgtcattg tctctcagtg gaccaacatg
                                                                    240
ctgaaagttg tagcattgca cctgaagaag catggactga cttatgccac catcgatggc
                                                                    300
                                                                    360
tctgtcaatc ccaagcagag aatggacttg gtagaggcat ttaaccactc cagaggccct
                                                                    420
caggtaatgc taatctctct cttggccgga gtgttggtct aaacctgact ggaggaaatc
acctctttct tttggacatg cactggaatc catcacttga agatcaagct tgtgaccgaa
                                                                    480
tttaccgagt agggcagcag aaagatgttg tcatacacag rtttgtttgt gagggaacag
                                                                    540
tagaagaaaa gatcttacag ctccaagaaa aaaagraaga tttggccaaa caagttctat
                                                                    600
cagggtetgg agaatetgte accaagetea cettggetga cetcagagte etttttggea
                                                                    660
tctaacctcc tgtggataag ggctcagaat agcaccattg ctgtgatgtt gcacctgtaa
                                                                    720
ccatcttttt atgggtggag cagagagtca atccctgcag ccaccctgca gcgcatctct
                                                                    780
gcagttetet cagtgcagge agttetteet etcaggetga agateaagga gatgetttgt
                                                                    840
acatgaacag atgctgagta tctgttatca ttgtattgtt tagtgtcagt gtatcattta
                                                                    900
gtatttgtat cactgtacca tttagtgttg tatatcactc agtcatttaa tattggttat
                                                                    960
caccatacag tttaatattt gtatcatttg gttcattgta tcgtttagta tttctattat
                                                                   1020
aacatttcta tttgtagtat ttgtataata tttgtgtcat ttttaatagt atttgtattt
                                                                   1080
ttacaaattt gcagtatttg tagcatttag tatcattgtt tcatttagta tttggtacaa
                                                                   1140
1200
```

```
acaatccaat actaataata ctattggtac aatccaatac taataatact aacagtagta
                                                                   1260
1320
<210> 1130
<211> 1271
<212> DNA
<213> Homo sapiens
<400> 1130
ggcacgagat cttgacagta ttatctgtac ctcctcatga ggcagataac ctagatccca
                                                                     60
gtgacgactc gttgggacaa tcattttatg attacacaga aaagcaagca gtgcccatat
                                                                    120
cggtccccag atacaaacat gtggagcaga atggtgagaa gtttgtggta tataatgttt
                                                                    180
                                                                    240
acatggcagg gaggcagctg tgttctaagc ggtaccggga gtttgctatc ctacaccaga
acctgaagag agagtttgcc aactttacat ttcctcgact cccagggaag tggccatttt
                                                                    300
                                                                    360
cattatcaga acaacaatta gatgcccgac gtcggggatt ggaagaatat ctagaaaaag
tgtgttcaat acgagtaatt ggtgagagtg acatcatgca ggaattccta tcagaatccg
                                                                    420
                                                                    480
atgagaacta caatggtgtg tccgacgtag agctgagagt agcattacca gatggaacaa
                                                                    540
cggttacagt cagggttaaa aagaacagta ctacagacca agtatatcag tacgtaaatt
                                                                    600
ggcacctaat gagtttcctc acaaactcta cattcagaat tatacatcag ctgtgccagg
cacctgcttg accattcgaa agtggctttt tacaacagaa gaagaaattc tcttaaatga
                                                                    660
caatgacctt gctgttacct acttctttca tcaggcagtc gatgatgtga agaaaggtta
                                                                    720
catcaaagca gaagaaaagt cctatcaatt acagaagcta tacgaacaaa gaaaaatggt
                                                                    780
                                                                    840
catgtacctc aacatgctaa ggacttgtga gggctacaat gaaatcatct ttccccactg
                                                                    900
tgcctgtgac tccaggagga aggggcacgt tatcacagcc atcagcatca cgcactttaa
                                                                    960
actgcatgcc tgcactgaag aaggacagct ggagaaccag gtaattgcat ttgaatggga
tgagatgcag cgatgggaca cagatgaaga agggatggcc ttctgtttcg aatatgcacg
                                                                   1020
aggagagaag aagccccgat gggttaaaat cttcacgcca tatttcaatt acatgcatga
                                                                   1080
gtgcttcgag agggtgttct gcgagctcaa gtggagaaaa gagaacattt tccagatggc
                                                                   1140
gaggtcacag cagagagatg tggccaccta gcctttcctt atccccttcc cttcccttca
                                                                   1200
ccccatcct cttactcctt tcatgtccca tttcagacag agtaaccatt aacaaaaaa
                                                                   1260
                                                                   1271
aaaaaaaaa a
<210> 1131
<211> 2455
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1769)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2433)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2434)
<223> n equals a,t,g, or c
<400> 1131
gggctcggcg cactccactg accgtcccga cgatgctacg cgcgcccggc tgcctcctcc
                                                                     60
ggacctccgt agcgcctgcc gcggccctgg ctgcggcgct gctctcgtcg cttgcgcgct
                                                                    120
gctctcttct agagccgagg gacccggtgg cctcgtcgct cagcccctat ttcggcacca
                                                                    180
agactegeta egaggatgte aacceegtge tattgteggg eecegagget eegtggeggg
                                                                    240
accetgaget getggagggg acctgeacce eggtgeaget ggtegeeete attegeeacg
                                                                    300
gcacccgcta ccccacggtc aaacagatcc gcaagctgag gcagctgcac gggttgctgc
                                                                    360
aggcccgcgg gtccagggat ggcggggcta gtagtaccgg cagccgcgac ctgggtgcag
                                                                    420
cgctggccga ctggcctttg tggtacgcgg actggatgga cgggcagcta gtagaraagg
                                                                    480
```

```
540
gacggcagga tatgcgacag ctggcgctgc gtctggcctc gctcttcccg gcccttttca
gccgtgagaa ctacggccgc tgcggctcat caccagttcc aagcaccgct gcatggatag
                                                                     600
cagegeegee tteetgeagg ggetgtggea geactaceae cetggettge egeegsegga
                                                                     660
cgtcgcagat atggagtttg gacctccaac agttaatgat aaactaatga gattttttga
                                                                     720
tcactgtgag aagtttttaa ctgaagtaga aaaaaatgct acagctcttt atcacgtgga
                                                                     780
agccttcaaa actggaccag aaatgcagaa cattttaaaa aaagttgcag ctactttgca
                                                                     840
agtgccagta aatgatttaa atgcagattt aattcaagta gcctttttca cctgttcatt
                                                                     900
tgacctggca attaaaggtg ttaaatctcc ttggtgtgat gtttttgaca tagatgatgc
                                                                     960
                                                                    1020
aaaggtatta gaatatttaa atgatctgaa acaatattgg aaaagaggat atgggtatac
tattaacagt cgatccagct gcaccttgtt tcaggatatc tttcagcact tggacaaagc
                                                                    1080
agttgaacag aaacaaaggt ctcagccaat ttcttctcca gtcatcctcc agtttggtca
                                                                    1140
tgcagagact cttcttccac tgctttctct catgggctac ttcaaagaca aggaacccct
                                                                    1200
aacagcgtac aattacaaaa aacaaatgca tcggaagttc cgaagtggtc tcattgtacc
                                                                    1260
                                                                    1320
ttatgcctcg aacctgatat ttgtgcttta ccactgtgaa aatgctaaga ctcctaaaga
                                                                    1380
acaattccga gtgcagatgt tattaaatga aaaggtgtta cctttggctt actcacaaga
                                                                    1440
aactgtttca ttttatgaag atctgaagaa ccactacaag gacatccttc agagttgtca
                                                                    1500
aaccagtgaa gaatgtgaat tagcaagggc taacagtaca tctgatgaac tatgagtaac
                                                                    1560
tgaagaacat ttttaattct ttaggaatct gcaatgagtg attacatgct tgtaataggt
                                                                    1620
aggcaattcc ttgattacag gaagctttta tattacttga gtatttctgt cttttcacag
                                                                    1680
aaaaacattg ggtttctctc tgggtttgga catgaaatgt aagaaaagat ttttcactgg
agcagctctc ttaaggagaa acaaatctat ttagagaaac agctggccct gcaaatgttt
                                                                    1740
                                                                    1800
acagaaatga aattctycct acttatatna gaaatctcac actgagatag aattgtgatt
tcataataac acttgaaaag tgctggagta acaaaatatc tcagttggac catccttaac
                                                                    1860
ttgattgaac tgtctaggaa ctttacagat tgttctgcag ttctctcttc ttttcctcag
                                                                    1920
gtaggacagc tctagcattt tcttaatcag gaatattgtg gtaagctggg agtatcactc
                                                                    1980
                                                                    2040
tggaagaaag taacatctcc agatgagaat ttgaaacaag aaacagagtg ttgtaaaagg
acaccttcac tgaagcaagt cggaaagtac aatgaaaata aatatttttg gtatttattt
                                                                    2100
atgaaatatt tgaacatttt ttcaataatt cctttttact tctaggaagt ctcaaaagac
                                                                    2160
catcttaaat tattatatgt ttggacaatt agcaacaagt cagatagtta gaatcgaagt
                                                                    2220
ttttcaaatc cattgcttag ctaacttttt cattctgtca cttggcttcg atttttatat
                                                                    2280
tttcctatta tatgaaatgt atcttttggt tgtttgattt ttctttcttt ctttgtaaat
                                                                    2340
agttctgagt tctgtcaaat gccgtgaaag tatttgctat aataaagaaa attcttgtga
                                                                    2400
ctttaaaaaa aaaaaaaaa aaaaaaaaga atnnctgcgg tccgcaaggg aattc
                                                                    2455
<210> 1132
<211> 587
<212> DNA
<213> Homo sapiens
<400> 1132
ggcacgagga ggagcccatc atggcgacgc cccctaagcg gcgggcggtg gaggccacgg
                                                                      60
gggagaaagt gctgcgctac gagaccttca tcagtgacgt gctgcagcgg gacttgcgaa
                                                                     120
                                                                     180
aggtgctgga ccatcgagac aaggtatatg agcagctggc caaatacctt caactgagaa
                                                                     240
atgtcattga gcgactccag gaagctaagc actcggagtt atatatgcag gtggatttgg
gctgtaactt cttcgttgac acagtggtcc cagatacttc acgcatctat gtggcctgg
                                                                     300
gatatggttt tttcctggag ttgacactgg cagaagctct caagttcatt gatcgtaaga
                                                                     360
gctctctcct cacagagctc agcaacagcc tcaccaagga ctccatgaat atcaaagccc
                                                                     420
atatccacat gttgctagag gggcttagag aactacaagg cctgcagaat ttcccagaga
                                                                     480
agoctcacca ttgacttctt coccccatcc tcagacatta aagagcctga atgccaaaaa
                                                                     540
587
<210> 1133
<211> 1069
<212> DNA
<213> Homo sapiens
<400> 1133
cgcgcggctg ctccgctctc cccgctccaa gcgccgatct gggcacccgc caccagcatg
                                                                      60
gacgctcgcc gcgtgccgca gaaagatctc agagtaaaga agaacttaaa gaaattcaga
                                                                     120
tatgtgaagt tgatttccat ggaaacctcg tcatcctctg atgacagttg tgacagcttt
                                                                     180
gcttctgata attttgcaaa cacgaaacct aaattcaggt cagatatcag tgaagaactg
                                                                     240
```

| gcaaatgttt | tttatgagga | ctctgataat | gaatctttct | gcggcttttc | agaaagtgag | 300 |
|---------------|--------------------------|------------|------------|------------|------------|--------------|
| gtgcaagatg | tawtagacca | ttgtggattt | ttacagaaac | caaggccaga | tgtcactaac | 360 |
| gaactggccg | gtatttttca | tgccgactct | gacgatgaat | cattttgcgg | tttctcagag | 420 |
| agtgagatac | aagatggaat | gaggctgcag | tcagttcggg | aaggctgtag | gacccgcagc | 480 |
| cagtgcaggc | actctggacc | tctcagggtg | gcgatgaagt | ttccagcgcg | gagtaccagg | 540 |
| ggagcaacca | acaaaaaagc | agagtcccgc | cagccctcag | agaattctgt | gactgattcc | 600 |
| aactccgatt | cagaagatga | aagtggaatg | aattttttgg | agaaaagggc | tttaaatata | 660 |
| aagcaaaaca | aagcaatgct | tgcaaaactc | atgtctgaat | tagaaagctt | ccctggctcg | 720 |
| | gacatcccct | | - | | | 780 |
| | gtgttgcttc | | | | | 840 |
| | ggatcctcgg | | | | | 900 |
| | tgttggtgag | | | _ | | 960 |
| | gccgtcgctc | | | | tcgcccagtg | 1020 |
| gaagaaatta | cagaggagga | gttggagaac | gtctgcagca | attctcgag | | 1069 |
| <210> 1134 | | | | | | |
| <211> 2777 | | | | | | |
| <211> 2/// | | | | | | |
| <213> Homo | sapiens | | | | | |
| 12151 1101110 | Dapieno | | | | | |
| <400> 1134 | | | | | | |
| | cagcagccgg | ctgctgagag | gccggtagcg | gcggcggtcc | cgaggggggg | 60 |
| | gctccctgag | | | | | 120 |
| | agctgtacag | | | | | 180 |
| | catacgatgt | | | | | 240 |
| | tcacgagtca | | | | | 300 |
| | aagactatct | | | | | 360 |
| gtcattgctg | acaatgaata | cccatcccgg | gtggccttta | ccttgctgga | gaaggtacta | 420 |
| | ccaagcaagt | | | | | 480 |
| cattacccag | ccctggatgg | tcacctcagt | agataccaga | acccacgaga | agctgatccc | 540 |
| atgactaaag | tgcaggccga | actagatgag | accaaaatca | ttctgcacaa | caccatggag | 600 |
| tctctgttag | agcgaggtga | gaagctagat | gacttggtgt | ccaaatccga | ggtgctggga | 660 |
| acacagtcta | aagccttcta | taaaactgcc | cggaaacaaa | actcatgctg | tgccatcatg | 720 |
| | tgccagaggc | | | | | 780 |
| | aagaagagac | | | | | 840 |
| | aagttcctgc | | | | | 900 |
| | agtgattctt | | | | | 960 |
| | aaactccgac | | | | | 1020 |
| | tctgtgggag | | | | | 1080 |
| | tttgtacatt | | | | | 1140 |
| | ggggtgggtg | | | | | 1200 |
| | ggagtgagcc | | | | | 1260 |
| | ggggggaaca | | | | | 1320 1380 |
| | ggattggctt | | | | | 1440 |
| | ggcttgtggg gtaccagcaa | | | | | 1500 |
| | atggtcagct | | | | | 1560 |
| | cagggcctct | | | | | 1620 |
| | gcaggtgctg | | | | | 1680 |
| | tgaaccgcct | | | | | 1740 |
| | ggtgccagcc | | | | | 1800 |
| | gctagttcct | | | | | 1860 |
| | ctgtgccctg | | | | | 1920 |
| | gcagcccagg | | | | | 1980 |
| | gtctgcccac | | | | | 2040 |
| | gggatggtgt | | | | | 2100 |
| | gagcttgcca | | | | | 2160 |
| | cccaatgtgg | | | | | 2220 |
| | cctcctggct | | | | | 2280 |
| | ttagcctacc | | | | | 2340 |
| taccctaagc | ccagggcccc | ttgaggccca | gactcagcct | gcccactggt | gccggagacg | 2400 |
| | | | | | | |

```
gagtggagtg ggcctggatc cgagggatgc tacctctccc tttcccactt gaggaccctg
                                                                 2460
gggagagatg gggggggga aaatggaggt atgaatttgg ggtaagagga agtgagatct
                                                                 2520
ccgcttgcag gtcagcccct gccttgcagg gcgggctggc ttgactcagg ccctgtgaga
                                                                 2580
tagaggccca gcccagcccc acccacagat cccctgctcc tgttgtgttc tgttgtaaat
                                                                 2640
catttggcga gactgtattt tagtaactgc tgcctaactt ccctgtgttc tatttgagag
                                                                 2700
2760
aaaacatcca gcgtccg
                                                                 2777
<210> 1135
<211> 603
<212> DNA
<213> Homo sapiens
<400> 1135
                                                                   60
cccacgcgtc cggctggact gttttgatct cttttaattg ttctgacaga tagttgggga
                                                                  120
tgagagccga ataaggtttg cctgaaataa ctgacactat ataatttctg ctttggcaaa
tactaagttc taacttgtca ttcctggtag aacaagcttt atttttcgag cctagcaatg
                                                                  180
atctagaagc agatgttatc tcagtgcctt ttgcaatttg ttgtgtgggt ttttttttt
                                                                  240
ttaaagccac acaataattt tggaaaacaa tgtatgggta gaacatgtgt ctgttaattg
                                                                  300
cacacaaaac cacttttaat gggtacagag ttaaatttga aggaataagt tcataatact
                                                                  360
gaagctagaa ccaagcagaa tctgtttttt tctgaggagt atcggtagca taaatgtgat
                                                                  420
tataaacata gtacacttga tatatggagg cagtgacagc tatttttaca aaatttaaat
                                                                  480
                                                                  540
ctgcaaatgg attcaacatg tttatgggtt attaaaattg tctgatttct taggttcttt
atagtacacg tgttgaaaat aaatgattaa gaattgtttc aagaaaaaaa aaaaaaaaa
                                                                  600
aaa
                                                                  603
<210> 1136
<211> 403
<212> DNA
<213> Homo sapiens
<400> 1136
ccacgcgtcc gaccaattct gatgtagatc tcacattata gcataacatt acagtagaag
                                                                   60
gaatgaaaac taagaaagta aatagtgaac atacagaact tactgcattt ccactttaaa
                                                                  120
acctatttat tttccctttt tctaatttta aacttttgtg gtcattcaga acctaatgtg
                                                                  180
ccttgtgttg acatttccat agacttcaca ctttacaaaa tttactgttt aaaaatactt
                                                                  240
gtcaaatgat ttactgaacc tttatacaaa agtacccttt ctaaattgac catttaaaaa
                                                                  300
tgtatttttg tgataccgtc attatgttct gcatttgcct cattttggca gatctacagt
                                                                  360
403
<210> 1137
<211> 2968
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (454)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1437)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2961)
<223> n equals a,t,g, or c
<220>
```

<221> SITE <222> (2964) <223> n equals a,t,g, or c <400> 1137 aattcggcac gagatcctct ggctgctctg ctcccaccgc ccggcccccg gcaggccccc 60 120 cacccacaat gcacacaact ggaggctcgg ccaggcgccc gccarctggt acaatgacac ctacccctg tctccccac aaaggacacc ggctgggatt cggtatcgaa tcgcagttat 180 cgcagacctg gacacagagt caagggccca agaggaaaac acctggttca gttacctgaa 240 aaagggctac ctgaccctgt cagacagtgg ggacaaggtg gccgtggaat gggacaaaga 300 ccatggggtc ctggagtccc acctggcgga gaaggggaga ggcatggagc tatccgacct 360 gattgttttc aatgggaaac tctactccgt ggatgaccgg acgggggtcg tctaccagat 420 480 cgaaggcagc aaagccgtgc cctgggtgat tctntccgac ggcgacggca ccgtggagaa aggcttcaag gccgaatggc tggcagtgaa ggacgagcgt ctgtacgtgg gcggcctggg 540 600 caaggagtgg acgaccacta cgggtgatgt ggtgaacgag aacccggagt gggtgaaggt 660 ggtgggctac aagggcagcg tggaccacga gaactgggtg tccaactaca acgccctgcg 720 ggctgctgcc ggcatccagc cgccaggcta cctcatccat gagtctgcct gctggagtga 780 cacgctgcag cgctggttct tcctgccgcg ccgcgccagc caggagcgct acagcgagaa 840 ggacgacgag cgcaagggcg ccaacctgct gctgagcgcc tcccctgact tcggcgacat 900 cgctgtgagc cacgtcgggg cggtggtccc cactcacggc ttctcgtcct tcaagttcat 960 ccccaacacc gacgaccaga tcattgtggc cctcaaatcc gaggaggaca gcggcagagt 1020 cgcctcctac atcatggcct tcacgctgga cgggcgcttc ctgttgccgg agaccaagat 1080 cggaagcgtg aaatacgaag gcatcgagtt catttaactc aaaacggaaa cactgagcaa ggccatcagg actcagcttt tataaaaaca agaggagtgc acttttgttt tgttttgttc 1140 1200 tttttggaac tgtgcctggg ttggaggtct ggacagggag cccagtcccg ggccccatag tggtgcgggc actggacccc cgggccccac ggaggccgcg gtctgaactg ctttccatgc 1260 1320 tgccatctgg tggtgatttc ggtcacttca ggcattgact caaggcctgc ctaactggct 1380 gggtcgtttc ttccatccga cctcgtttct tttctttcct atgttctttt gttcagtgaa 1440 tatccctaga gctcctacca tatgtcaggc cctatgcctc accctgagaa cgcagtnagc 1500 atgaggtgga cctgtttgct gggaacccca ggtcaccccc ttttcttcct actctgtgcc tggagcatca tgtccacccc tgcagatcct tggaaaagaa aatgtttatg ttgcagggta 1560 ttgcatggtc acgagtgagg gcaggcccct ggggacacat ctgcccacag ctgcacaggc 1620 cagggcgcag gcacatctgt tggttctcag gcctcagata aaaccatctc cgcatcatat 1680 1740 ggccagtgac cgctttctcc cttcaagaaa attctgtggc tgtgcagtac tttgaagttt taattattaa cctgctttaa ttaaagcagt ttcctttctt ataaagtgga atcaccaaat 1800 cttatcacac agagcacagt cctgtagtta cccagcccgc tccagcagtg cgggagattg 1860 taaggaagcg gtggcggctg gtgaagcaag tctcacatgt cggcgttctt ggccaatgga 1920 tacaaagata aagaaaatgt tgcctttttc taggaactgt cagaaatcct catgcctttc 1980 aagacttctg tgaatgactt gaatttttta ttccctgcct agggtctgtg aacgaggcct 2040 gtctcttccc tggggtttct ttccatggcc tttatttctc ctcttccagt gggagttttg 2100 caggctcttc tctgtggaaa cttcacgagc gttggctggg cctcggcttc gctggagtgt 2160 actccagggt gaaggcagag tgggatttga gacccaggtt aggcacgacc caggctgaga 2220 agggacgttt ccatcattca cagtgccctc cccacagcac tacctcaccc cgaccccac 2280 cctcactcct accccacccc gcgatcgtca ggggtgccac ggtgggccgg agggtgccgg 2340 ctctggctgt ccctgtgccg gtccctcaca aacctctccc cctttgaaac tcaagcacag 2400 ctgcgaggag ggcagcgagg agggacccct ctctcatggt tgtctctttc ccccgctatg 2460 tcataggtag tggaggaagc gaaggaagtg aacgctgaat gtgacgcatt tctgaagagc 2520 tcagctgtca ccgggcatag cctggaagcc ccaagtctgt tctgactttg cctggctgtc 2580 tccttgaccc gcctcctaga tcattgtcct tgatgtccag gctgggtcat ttaaaataga 2640 gatgcaatca ggaaggttgg gggacttggg actgtggctg aattgagacc ttgctgatgt 2700 attcatgtca gcacctgagt cacagcccag gtgcccggaa gcagcctctt cgcataggca 2760 2820 gtgatttgcg attactttaa agctcacctt ttttcttccc ctctctgttc gctgctgtca gcataatgat tgtgttcctt ccctatggga tccatctgtt ttgtaaacaa taaagcgtct 2880 2940 2968 aaaaaaaaa nagnagag <210> 1138 <211> 3021

<212> DNA

<213> Homo sapiens

| .400- 1120 | | | | | | |
|------------|------------|--------------------------|------------|------------|------------|--------------|
| <400> 1138 | aggagtata. | atggctgcga | cactooctaa | taataatttc | tgcccaatta | 60 |
| cttgtgaate | agccagcgcg | cctgaagcag | ttcgaaatac | attgagtttg | atgcattcct | 120 |
| ctggtgaaag | tracttotra | gggcagtttg | ctttccatgt | taatcttcct | gcaaaatctg | 180 |
| geggeaegea | agacattett | ttagttgtcc | ccaatgttat | gggtatgatg | tgctggtytc | 240 |
| ctcctctcca | taagatgggc | aacagtgtta | agggaattca | cttttgtcac | gatcttgttt | 300 |
| ctctatataa | tttccataac | tatgataatt | tgagacactt | tgcaaaaaaa | cttgatcctc | 360 |
| daadadaadd | togtgatcaa | aggcattcct | ttggaccatt | ggactatgaa | agtctccaac | 420 |
| aagaacttgc | tttaaaagag | acagtatgga | aaaaagtgtc | acctgagtca | aatgaggaca | 480 |
| tctctacaac | totagtatat | agaatggaaa | gtctgggaga | gaaaagctaa | agaaatgggt | 540 |
| tctagtttca | gaatgtttct | tcatttaatc | tttcaaacat | ctttagcttt | tttttgcaag | 600 |
| ttataaatat | ttatttgagg | tattttttgt | tctcaatctt | gggtgctgga | gccataaagc | 660 |
| tttttttcc | ttttaatctt | tgtataaagg | cagtagatta | agaagtgcat | ttgttggtct | 720 |
| ttaaaaagta | tttacaagta | cataaatttg | ctttattttt | aaaaatacaa | aaaggaaaaa | 780 |
| tttaaatttt | ttttgatgta | attaaaatgt | taactatgtg | gtcagataat | cccattttac | 840 |
| aatagtaaca | gaaaattgta | attcttagtt | ctaaaattca | caaattaaac | tcataagttt | 900 |
| tgttgcattt | tgttttttct | tttccatttt | taaaactaat | gtgatgtctt | tagtggcaat | 960 |
| agaaggtact | tctatgctaa | atacaaaact | aaaaaggcaa | aataatgaac | cccaaattat | 1020 |
| tttatttaaa | atagcagtgg | attataaaat | tagcttgtgt | ttacatttat | gccatttttg | 1080 |
| gtgatagatt | ggctttacat | tttaaaaaat | ttatttaaaa | atttatcaaa | tgctttaaaa | 1140 |
| tatgactcct | acttttttta | ttttgcaact | cctctgttct | gtcagagttg | ttatatacag | 1200 |
| gagtgtctta | tgttactaaa | acattccagc | caaagaattt | cagatgtgag | ataatgatgt | 1260 1320 |
| ttcatcaata | aaaagctata | atggttagtt | actcagaagg | agaaacagtg | agtgtcttca | 1380 |
| agtgaattgt | tcacctaaac | aattttattt | tcatattatc | cacataactt | etattaatt | 1440 |
| atatttaaat | atgaatggca | aattttggtt | tttagctttt | acattttatt | accidation | 1500 |
| tataaatgct | aatatttctt | ttgtgataag | ttatagcatc | tcataaagtt | etacteatee | 1560 |
| gaagttttt | agagtacttg | agaaatgaat | ttagtctgca | ggtagtaagt | acyclactaa | 1620 |
| aatacgttag | atctaaatcc | ttttatttgg | tataaaaatg | caatattgay | tratartatt | 1680 |
| tgtttttaag | agaactatag | attctacaca | accigatite | adytaattat | cttcttcctt | 1740 |
| tatagttgtc | ttggcaaagt | gattgtaaaa | attagagtat | aatttcaact | ttattaaaac | 1800 |
| cttccatata | cttctctggt | tttccccata | gitteeetat | tttcttagca | tratrotata | 1860 |
| ctgttaattt | tagtggggga | ttagaagaaa ctgtaaaagt | aacttggtgg | taccaaaaaa | gatttcactg | 1920 |
| tgtatgtggt | aatyyaaayt | aaataaagat | adacacageg | gatcataatg | tettaagttt | 1980 |
| agtatttag | atattaagag | aagaaattcc | cttctagagg | tactaaccaa | aaagcctttt | 2040 |
| gggaactgtg | acaccaagaa | tttatatatt | taaataatta | tattttaagt | tgtagaggat | 2100 |
| tttaggaagg | attttatoct | tacttgaatg | ttctttgaat | gttcagatgc | atatcctaac | 2160 |
| tagatacttc | tcaaggctt | actgcatatt | tatattacat | atttatqtta | gttgcaccag | 2220 |
| ggacgettat | agtttgggca | accgaatgcc | ttaattggaa | aaaaggcatt | gtggtttccc | 2280 |
| ctatgatcta | aattottaca | ttttaccatt | tcattccgaa | gttggtttta | ctttattaaa | 2340 |
| tgaagattta | gttttcatat | cgtatacata | gctgtataga | tttcaaaatt | aggttgttaa | 2400 |
| tttatatcac | ttactatttt | tgtgttggta | atgctttaaa | tgcatactta | aaaatgaagt | 2460 |
| actottatct | aagctactgt | gtttagaaaa | tgttaagaat | gagcagaaat | ttttatagaa | 2520 |
| aagtataaac | ggaagaagag | ataagatact | gcgaataggc | cctcaaactt | aaaaaagaaa | 2580 |
| aaactttgcc | agttttaagg | acatattttg | attctttcag | tattcttaac | acctttttaa | 2640 |
| acaaagttct | tgatagtacc | cactattatt | gggtttgttt | tatgccatta | ttgattcttg | 2700 |
| atattcaagc | atttacaatg | tagcatattt | gattttcttt | tttctttctt | tttttggcat | 2760 |
| cattaacatt | tcatttgaaa | tgcatattgt | tcttgaagta | ctttgtttt | agcataaatg | 2820 |
| ttgtgcattt | tatcttagtg | tttggatgaa | aacatttgtg | ttgtttagct | ttcatttgct | 2880 |
| ttgtatattt | aataatgtac | ctttattttc | cagtatgcct | acattttgta | ttgcacaata | 2940 |
| aatttattt | aagctgaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | 3000 |
| aaaaaaaaa | agggcggccg | C | | | | 3021 |
| | | | | | | |
| <210> 1139 | | | | | | |
| <211> 3953 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1139 | | | | | 2221222212 | 60 |
| gcggacgcgt | ttggcaacag | cgagggcaaa | gagetggtgg | atagasttaa | traarraces | 120 |
| aaacagggtc | tgttacctag | cttggaagat | tegetgttet | alacaalige | cyaayyacaa | 120 |

gagaaaatac ctgttcataa atttattaca gcactcaaat ctacaggatt gcgaacgtct 180 240 gatcccaggt tgaaagagtg tatggatatg ttaagattaa ctcttcaaac aacatcagat ggtgtcatgc tagacaaaga tctttttaaa aaatgtgttc agagcaacat tgttttgttg 300 acacaagcat ttagaagaaa gtttgtgatt cctgacttta tgtcttttac ctcacacatt 360 gatgagttat atgaaagtgc taaaaagcag tctggaggaa aggttgcaga ttatattcct 420 caactggcca aattcagtcc cgatttgtgg ggtgtgtctg tttgtacagt agatggacag 480 aggcattcta ctggagatac caaagttccc ttctgtcttc agtcctgtgt aaaacctttg 540 aaatatgcca ttgctgttaa tgatcttgga actgaatatg tgcatcgata tgttggaaaa 600 660 gagccgagtg gactaagatt caacaaacta tttttgaatg aagatgataa accacataat cctatggtaa atgctggagc aattgttgtg acttcactaa taaagcaagg agtaaataat 720 780 gctgaaaaat ttgactatgt catgcagttt ttgaataaga tggctggtaa tgaatatgtt 840 ggattcagta atgcaacgtt tcagtctgaa agagaaagtg gagatcgaaa ttttgcaata 900 ggatattact taaaagaaaa gaagtgtttt ccagaaggca cagacatggt tggtatatta 960 gacttctact tccagctgtg ctccattgaa gtgacttgtg aatcagccag tgtgatggct gcgacactgg ctaatggtgg tttctgccca attactggtg aaagagtact gagccctgaa 1020 1080 gcagttcgaa atacattgag tttgatgcat tcctgtggca tgtatgactt ctcagggcag 1140 tttgctttcc atgttggtct tcctgcaaaa tctggagttg ctgggggcat tcttttagtt 1200 gtccccaatg ttatgggtat gatgtgctgg tctcctcctc tggataagat gggcaacagt 1260 qttaagggaa ttcacttttg tcacgatctt gtttctctgt gtaatttcca taactatgat 1320 aatttgagac actttgcaaa aaaacttgat cctcgaagag aaggtggtga tcaaaggcat 1380 tcctttggac cattggacta tgaaagtctc caacaagaac ttgctttaaa agagacagta 1440 tggaaaaaag tgtcacctga gtcaaatgag gacatctcta caactgtagt atatagaatg 1500 gaaagtctgg gagagaaaag ctaaagaaat gggttctagt ttcagaatgt ttcttcattt 1560 aatctttcaa acatctttag cttttttttg caagttataa atatttattt gaggtatttt ttgttctcaa tcttgggtgc tggagccata aagctttttt ttccttttaa tctttgtata 1620 aaggcagtag attaagaagt gcatttgttg gtctttaaaa agtatttaca agtacataaa 1680 1740 tttgctttat ttttaaaaat acaaaaaaaa aatttaaatt ttttttgatg taattaaaat gttaactatg tggtcagata atcccatttt acaatagtaa cagaaaattg taattcttag 1800 1860 ttctaaaatt cacaaattaa actcataagt tttgttgcat tttgtttttt cttttccatt tttaaaacta atgtgatgtc tttagtggca atagaaggta cttctatgct aaatacaaaa 1920 ctaaaaaggc aaaataatga accccaaatt attttattta aaatagcagt ggattataaa 1980 attagcttgt gtttacattt atgccatttt tggtgataga ttggctttac attttaaaaa 2040 atttatttaa aaatttatca aatgctttaa aatatgactc ctactttttt tattttgcaa 2100 ctcctctgtt ctgtcagagt tgttatatac aggagtgtct tatgttacta aaacattcca 2160 gccaaagaat ttcagatgtg agataatgat gtttcatcaa taaaaagcta taatggttag 2220 ttactcagaa ggagaaacag tgagtgtctt caagtgaatt gttcacctaa acaattttat 2280 tttcatatta tccacataac tttttctatg ttatatttaa atatgaatgg caaattttgg 2340 2400 tttttagctt ttacatttta ttatcttaat tttataaatg ctaatatttc ttttgtgata agttatagca tctcataaag tttgttctat ttgaagtttt ttagagtact tgagaaatga 2460 atttagtctg caggtagtaa gtatgctact aaaatacgtt agatctaaat ccttttattt 2520 ggtataaaaa tgcaatattg agaatcaaaa cttgttttta agagaactat agattctaca 2580 caacctgatt tcaagtaatt attcatagta tttatagttg tcttggcaaa gtgattgtaa 2640 aattctgtag gacctattca cacttcttcc ttcttccata tacttctctg gttttcccca 2700 tagttcccct ataatttcaa gtttgttgaa acctgttaat tttagtgggg gattagaaga 2760 2820 aaaacttggt ggtttcttag catgatggtg tatgtatgtg gtaatggaaa gtctgtaaaa 2880 qtaaatatag tgtagcaaaa aagatttcac tgagtatttt agatactagt gcaaataaag atagaaaatc ttgatcataa tgtcttaagt ttgggaactg tgatattaag aaaagaaatt 2940 cccttctaga ggtgctggcc aaaaagcctt ttgggctaac ttaagtatta aatttatata 3000 3060 tttaaataat tatattttaa gttgtagagg attttcccaa ggattttatg cttacttgaa tgttctttga atgttcagat gcatatccta actggatgct tctcaaggcc ttactgcata 3120 tttgtgttgc atatttatgt tagttgcacc agggccattt gtagtttggg caaccgaatg 3180 3240 ccttaattgg aaaaaaggca ttgtggtttc ccctatgatc taaattgtta cattttacca 3300 tttcattccg aagttggttt tactttatta aatgaagatt tagttttcat atcgtataca 3360 tagctgtata gatttcaaaa ttaggttgtt aatttgtgtc acttactatt tttgtgttgg 3420 taatgcttta aatgcatact taaaaatgaa gtactgttat ctaagctact gtgtttagaa 3480 ctgcgaatag gccctcaaac ttaaaaaaaga aaaaactttg ccagttttaa ggacatattt 3540 tgattctttc agtattctta acaccttttt aaacaaagtt cttgatagta cccactatta 3600 3660 ttqqqtttqt tttatgccat tattgattct tgatattcaa gcatttacaa tgtagcatat 3720 ttgattttct tttttctttc tttttttggc atcattaaca tttcatttga aatgcatatt gttcttgaag tactttgttt ttagcataaa tgttgtgcat tttatcttag tgtttggatg 3780

| aaaacatttg | tgttgtttag | ctttcatttg | ctttgtatat | ttaataatgt | acctttattt | 3840 |
|------------|------------|--------------------------|------------|------------|------------|--------------|
| tccagtatgc | ctacattttg | tattgcacaa | taaatttatt | ttaagctgaa | aaaaaaaaa | 3900 |
| aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaagggcggc | cgc | 3953 |
| | | | | | | |
| <210> 1140 | | | | | | |
| <211> 3953 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1140 | | | | | | 60 |
| | | cgagggcaaa | | | | 60 120 |
| | | cttggaagat | | | | 120 180 |
| | | atttattaca | | | | 240 |
| | | tatggatatg | | | | 300 |
| | | tctttttaaa gtttgtgatt | | | | 360 |
| | | taaaaagcag | | | | 420 |
| | | cgatttgtgg | | | | 480 |
| | | caaagttccc | | | | 540 |
| | | tgatcttgga | | | | 600 |
| | | caacaaacta | | | | 660 |
| | | aattgttgtg | | | | 720 |
| | | catgcagttt | | | | 780 |
| | | tcagtctgaa | | | | 840 |
| | | gaagtgtttt | | | | 900 |
| | | ctccattgaa | | | | 960 |
| | | tttctgccca | | | | 1020 |
| | | tttgatgcat | | | | 1080 |
| | | tcctgcaaaa | | | | 1140 |
| | | gatgtgctgg | | | | 1200 |
| | | tcacgatctt | | | | 1260 |
| | | aaaacttgat | | | | 1320 |
| | | tgaaagtctc | | | | 1380 |
| tggaaaaaag | tgtcacctga | gtcaaatgag | gacatctcta | caactgtagt | atatagaatg | 1440 |
| gaaagtctgg | gagagaaaag | ctaaagaaat | gggttctagt | ttcagaatgt | ttcttcattt | 1500 |
| aatctttcaa | acatctttag | ctttttttg | caagttataa | atatttattt | gaggtatttt | 1560 |
| | | tggagccata | | | | 1620 |
| | | gcatttgttg | | | | 1680 |
| | | acaaaaaaa | | | | 1740 |
| _ | | atcccatttt | | | | 1800 |
| | | actcataagt | | | | 1860 |
| | | tttagtggca | | | | 1920 |
| | | accccaaatt | | | | 1980 |
| | | atgccatttt | | | | 2040 |
| | | aatgctttaa | _ | | | 2100 2160 |
| _ | | tgttatatac | | | | 2220 |
| | | agataatgat tgagtgtctt | | | | 2280 |
| | | tttttctatg | | | | 2340 |
| | | ttatcttaat | | | | 2400 |
| _ | | tttgttctat | | | | 2460 |
| - | | gtatgctact | | | | 2520 |
| | | agaatcaaaa | | | | 2580 |
| | | attcatagta | | | | 2640 |
| | | cacttcttcc | | | | 2700 |
| | | gtttgttgaa | | | | 2760 |
| | | catgatggtg | | | | 2820 |
| | | aagatttcac | | | | 2880 |
| | | tgtcttaagt | | | | 2940 |
| - | | aaaaagcctt | | | | 3000 |
| | | gttgtagagg | | | | 3060 |
| | | _ | | | | |

| tgttctttga | atottcagat | gcatatccta | actggatgct | tctcaaggcc | ttactgcata | 3120 |
|------------|------------|------------|------------|------------|------------|-----------|
| tttgtgttgc | atatttatat | tagttgcacc | agggccattt | gtagtttggg | caaccgaatg | 3180 |
| ccttaattgg | aaaaaaggca | ttataatttc | ccctatgatc | taaattgtta | cattttacca | 3240 |
| tttcattccg | aagttggttt | tactttatta | aatgaagatt | tagttttcat | atcgtataca | 3300 |
| tagctgtata | gatttcaaaa | ttaggttgtt | aatttgtgtc | acttactatt | tttgtgttgg | 3360 |
| taatgcttta | aatgcatact | taaaaatgaa | gtactgttat | ctaagctact | gtgtttagaa | 3420 |
| aatgttaaga | atgaggagaa | atttttatag | aaaagtataa | acggaagaag | agataagata | 3480 |
| ctgcgaatag | acceteaaac | ttaaaaaaga | aaaaactttq | ccagttttaa | ggacatattt | 3540 |
| tgattctttc | agtattetta | acaccttttt | aaacaaaqtt | cttgatagta | cccactatta | 3600 |
| ttgggtttgt | tttatgccat | tattgattct | tgatattcaa | gcatttacaa | tgtagcatat | 3660 |
| ttgattttct | tttttctttc | ttttttagc | atcattaaca | tttcatttga | aatgcatatt | 3720 |
| gttcttgaag | tactttattt | ttagcataaa | tgttgtgcat | tttatcttag | tgtttggatg | 3780 |
| aaaacatttg | tattatttag | ctttcatttg | ctttgtatat | ttaataatgt | acctttattt | 3840 |
| tccagtatgc | ctacattttg | tattgcacaa | taaatttatt | ttaagctgaa | aaaaaaaaa | 3900 |
| aaaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaagggcggc | cgc | 3953 |
| | | | | | | |
| <210> 1141 | | | | | | |
| <211> 658 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1141 | | | | | | |
| gcagtttatc | ctttcccagg | ttgcactcct | ggagcaggtg | aatgccttgg | tgcccatgct | 60 |
| ggacagtgct | cacatcaaag | ccgttcctga | gcatgctgcc | cgcctgcagc | gcttggccca | 120 |
| gatccacatt | cagcagcagg | accagtgtgt | ggaaatcact | gaggagtcca | aggctctcct | 180 |
| ggaggaatac | aacaagacta | caatgcttct | ctccaagcaa | ttcgtgcagt | gggatgagct | 240 |
| actttgccag | ctagaggccg | ccacgcaagt | gaagccagca | gaggagtgat | agctgctccc | 300 |
| catcccaaag | tgggcctggg | cagtcaggct | ccagggccct | atgccaacct | gcctttgtta | 360 |
| caaggcagag | gaagctttgt | atttattggc | ttcaaggccc | acctctctgt | actctgggct | 420 |
| ctaaagttgg | aggtcaggtt | acctgaggtt | tgcaatttgc | aacacccacc | ctcccccaa | 480 |
| tcagtgttct | tatttcagtg | acaataaacc | atagagatga | aaaaaaaaaa | aaaaaaaaa | 540 |
| aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaaa | aaaaaaaaa | 600 |
| aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaa | 658 |
| | | | | | | |
| <210> 1142 | | | | | | |
| <211> 633 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1142 | | | | | | |
| cccacacata | caaccactta | gaatatatat | cgatacatta | taataccaaa | tggtaacatg | 60 |
| ggagtgtta | atccaacaga | aatacacaat | cgagggcagc | tgaagtcaca | catgaaagaa | 120 |
| gccatgatca | agettagttt | ccacttgctc | tgcttcttca | tgtatcttta | tagtggtagc | 180 |
| aactgccctt | gctaatcacc | gtaacctcgg | ctgagaaaga | agaggaagcg | aaatccaaga | 240 |
| tacaactcaa | ttcatcaaag | cctagcaggt | ccctcagct | gccttttcat | gcctgccaca | 300 |
| gactacagta | ggacaaaacc | tgacctggtc | tttgaagtta | agagctaaga | aagcttccta | 360 |
| tagtagtatc | tcccatggca | cttaccacat | tctatctggt | attacaatta | tttgtatgca | 420 |
| attaatcact | cttagattgt | atgttcctgg | agggcagaat | atgcccattc | atatttgtat | 480 |
| cttcttcctt | ctgctcttgg | cacctaacac | agtgccttgc | acacaaacaa | taaatgattg | 540 |
| ttgagtgaat | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaaa | 600 |
| | | aaaaaaaaa | | | | 633 |
| | | | | | | |
| <210> 1143 | | | | | | |
| <211> 275 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1143 | | | | | | 60 |
| ccacgcgtcc | gagcttcact | ccttgctggc | cagggagttg | gggactcaga | gggaccactt | 60 120 |
| ggggccagcc | agactggcct | caatggcgga | ctcagtcaca | trgactgacg | gggaccaggg | 180 |
| cttgtgtggg | tcgagagcgc | cctcatggtg | ctggtgctgt | cgcgcgcagg | tcccctgggg | 190 |
| | | | | | | |

| | gcgccaatgg | tateteeee | gageteacag | agttettgga | ataaaagcaa | 240 |
|------------|--------------------------|------------|------------|------------------------|------------|-------------|
| | cttaaaaaaa | | | ageceeegga | acadagona | 275 |
| <210> 1144 | | | | | | |
| <211> 1439 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1144 | | | | | ~t~~~~~~ | 60 |
| ccacgcgtcc | gggctctctc | atttccagca | gacacccttc | acatatacta | ctcctcattt | 120 |
| ctcagggaat | cttggcagaa acccgttctc | ttatatagat | cttccactgt | gagatgat | gtggaacctt | 180 |
| tttacttaat | cctgtcttct | acctttccta | agattacccc | accgatctcc | tgtttgtgtc | 240 |
| tcaatatgtt | cttttctctg | ctcagatctc | cccattctta | aaagaactgt | ccctcctcc | 300 |
| tcgcctcctt | cttcaattct | gcccctcctg | tgtctgagac | cgttcacagg | aacgctctgc | 360 |
| caaggatgcc | tgactggccc | ccagcaagcc | actcctgggg | cccttgtgtg | ctggctccct | 420 |
| tccagccctg | ccttcctgct | tctgctctca | gactccgtgg | tctctcttgg | gcttcagggc | 480 540 |
| ctgggacctc | ctggcagcag ccagatatat | tgggctaccc | caccccccaa | atatatatat | acgygaaacc | 600 |
| accctggtga | acacctggga | acacacacac | tctggtgtat | atatatttac | acacacctqq | 660 |
| gaaactgccc | tgatgaccag | agcacactgt | ctttctcctc | tgccctctga | gcacctcaag | 720 |
| ctgctgtgcc | tggcgctctt | cttctgttct | cccctcacag | aattcacgtt | cctccacagt | 780 |
| ctcagagaac | atctttgagg | aaatggtctc | cccatatggg | actctcactt | ctgtcagtcc | 840 |
| tgaacatcag | tgggtgagga | cagggctggg | cttggccctc | agaagaggag | aggagcacct | 900 |
| gcctccgggg | agggtcccta | tcccaagagg | tctgtcccta | aggctgggat | ggggcttctt | 960 1020 |
| ggtctccaca | ggttcactct | ccaccagcca | getettette | gaatcatctc | caatactttt | 1020 |
| tgggcacctc | ctcctgctgc cctgcagcta | cctatttatt | tagtettage | gaatcaccct | tecettteet | 1140 |
| ccctacccca | gtgcccacag | agaatatcta | acagcaaaac | gtacttttcc | tccactggac | 1200 |
| tccaccctgg | cttggagcag | atatggaatt | cccagttctg | cccacagcct | cctcccttag | 1260 |
| ctcccatccc | cagctgctca | ccccaaaca | cccccatcct | cctgccacag | ttttaaaaag | 1320 |
| tgttgcttgg | attgggccat | cgcctgctta | gaaacttaaa | tgtcttttgt | ggcttctcaa | 1380 |
| ataaacattt | aggcccttag | tttggaaaaa | aaaaaaaaaa | aaaaaaaaaa | aaaaaaaaa | 1439 |
| <210> 1145 | | | | | | |
| <211> 1020 | | | | | | |
| <212> DNA | • | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1145 | | | | | tastatatta | 60 |
| gggggacacg | ggaaaggccc catgcttggg | gtgggaatag | catecettet | ctcactaaga | ctaggactgc | 120 |
| ttacagaatg | cgaatataag | tatccttatt | tgggagaaaa | gtacattttc | aagggctggt | 180 |
| aaaatgacgt | ggaggaaggg | aggatccagg | gagccttctg | aagagtattg | tcaggatgtc | 240 |
| tcttctcttt | cagccacctg | gatatgtttc | acattttgtt | tcccaaacaa | ggactagatt | 300 |
| ggatcccaga | agggaatggt | ttccttagta | tacattccga | attcctttgt | aagggaaaaa | 360 |
| tccacttcat | ctggtctaag | aatacataag | aacaaatgaa | aatgttgtgg | ctggagatgt | 420 480 |
| tcctgagtta | atatcaggat tccatctgta | gtttgcctgc | tggtttctgt | cctcaacaac | adadcatage | 540 |
| tgccaattca | cagaaaacgt | tttatkggga | gttgttactt | tetataacta | aagtggggaa | 600 |
| catgagggtg | cctttaccga | gccctcatat | tccatqtqta | ctctgtattt | tattgaggct | 660 |
| gtttcccagt | cagaacagcg | tctctctttg | tttgtcattc | caaatctttc | agtgtcttta | 720 |
| gggctctgag | ggccctggag | agcctcaccc | aacctctcat | ccttccatgg | ctgtccccac | 780 |
| ctctgtgcac | ttatgagtca | atgttgccgc | acttcattac | atgctgttca | tattacagca | 840 |
| ttataagatt | tttcttta | aaagcctatc | ttcttcaatc | gggtagtaag | accattgtgg | 900 960 |
| gttgaggcat | gtttcatact | tcccacataa | caastassa | citaaaacag aaaaaaaa | gggcggccgc | 1020 |
| acatgaaata | aaaattatt | tttttttttt | Caaacaaaa | uuuuaaaaaa | 9990990090 | 1525 |
| <210> 1146 | i | | | | | |
| <211> 1076 | i | | | | | |
| <212> DNA | | | | | | |

<213> Homo sapiens <400> 1146 60 gagacaatag gggaagagat ttttatgttt tgttcactgc tgttttcaca gtatgttcaa tggctcttgg cacagaatag acaatattcg ttgactgaat gctattggac attatctgtt 120 tattgaatta gtgataaata ttttacccta cgttgatata aatggacata ttctacaggt 180 240 aacaaccctt tatttctaaa gcatgatctc aatgtattat aaattactga agtagattag ttcttttctt ttttttttg agacggagtc tcgctgtgtc acccaggttg gagtgcagtg 300 gcgtgatctc gtttcactgc aacctccgcc tcccaggttc aagtgattct cccgcctcag 360 cctcccgagt agctgggatt acaggcatac accacccgcc cagcgaatgt ttgtagagac 420 ggggtctcgc tgtgttgcca ggctggtcat caactcctga cctcaggtga tccacccacc 480 tcggcctccc aaagtgctgg gattacaggc gtgaaccacc tcgcccggcc gattagttct 540 taaagtagta atagacatct cccctccacc tttgggaact gcctcctcta gggagaagag 600 taccccgtga gttaggaagc caggtgatat ggtttgaata tttgttctct ccaaatctca 660 cgtggcaatg tgacctcctg tgttggaggt agggcctggt gagaggtgtt tggatcatgg 720 ggcagatgcc tcctgaatgg cttggtgtca tcctgtaaca agtgtattct tgccctattt 780 840 gttcccatga gaacctactg tttaaaaagag tctggtactt cctcttctcg ctctctctct 900 ctctcgcttc tgtctcacca tgtgacatgc tggctttcct tcaccttctg ccatgagtag aaggttcctg gggccctcac cagaaaaaaa tgctggtgcc atgcttcttg tacagcctgt 960 1020 gggaccatga gccaaataaa cctcttttct ttataaatta ccctagcctc aggtatttct 1076 <210> 1147 <211> 1109 <212> DNA <213> Homo sapiens <400> 1147 60 ggcacgagct ggagtccgac ctgccaagtg ccgtgacact tctgaaaaaat ctccaggagc 120 aagtgatggc tgtaactgca caagtgaaat cactgacaca aaaagttcaa gctggtgcct atcctacaga aaagggtctc agcttcttgg aagtgaaaga ccagctgctg ctcatgtacc 180 240 ttatggattt gacccacctc attctggaca aagcctcagg aggatctctt cagggacatg atgcagtttt gagactggta gagattcgaa cggttttgga aaagcttcgt cccttggacc 300 aaaagctgaa gtatcaaatt gacaagctga tcaagactgc agtgacaggc agccttagtg 360 agaatgaccc acttcgtttt aagcctcatc ccagcaatat gatgagcaag ttgagctctg 420 aggatgagga ggaagatgaa gcagaagatg accagtctga ggcttcaggg aagaaatctg 480 tgaagggagt gtctaagaaa tatgttcctc cacgcttggt tccagtacat tatgatgaaa 540 cagaagctga gcgggagaag aagcgtctag aacgagccaa gagacgggca ttgagcagct 600 ctgtcattcg tgaacttaag gagcagtact cagatgctcc agaggaaatc cgtgatgctc 660 720 ggcatcccca tgttacccgc cagagtcagg aggaccaaca caggattaac tatgaggaga gcatgatggt gcgtttgagc gtcagtaagc gagagaaagg acggcgaaaa cgagcaaatg 780 tcatgagete acaactteat tecettaeac actteagtga cateagtget ttgacagggg 840 gaactgttca tcttgatgag gatcagaatc ctattaagaa gcggaagaag atacctcaga 900 aaggtcggaa gaaaaaaggt tttcggaggc ggcggtgatt atgggtgtac atatttgtat 960 attttttgtc atcctgagat acttctaatt tcattgtata taggtggttt tccctggaat 1020 tcattaattg tttgctttgg acatgtggaa agagccttac taataaaatt gattttactt 1080 1109 atgaaaaaa aaaaaaaaa aaaaaaaaa <210> 1148 <211> 1963 <212> DNA <213> Homo sapiens <220> <221> SITE <222> (3) <223> n equals a,t,g, or c <400> 1148 60 atncaagete taataegaet caetataggg gggggagege aagegaggea gecatgtett 120 atcccqctga tgattatgag tctgaggcgg cttatgaccc ctacgcttat cccagcgact

```
180
atgatatgca cacaggagat ccaaagcagg accttgctta tgaacgtcag tatgaacagc
                                                                    240
aaacctatca ggtgatccct gaggtgatca aaaacttcat ccagtatttc cacaaaactg
                                                                    300
tctcagattt gattgaccag aaagtgtatg agctacaggc cagtcgtgtc tccagtgatg
                                                                    360
tcattgacca gaaggtgtat gagatccagg acatctatga gaacagctgg accaagctga
                                                                    420
ctgaaagatt cttcaagaat acaccttggc ccgaggctga agccattgct ccacaggttg
gcaatgatgc tgtcttcctg attttataca aagaattata ctacaggcac atatatgcca
                                                                    480
aagtcagtgg gggaccttcc ttggagcaga ggtttgaatc ctattacaac tactgcaatc
                                                                    540
                                                                    600
tcttcaacta cattcttaat gccgatggtc ctgctcccct tgaactaccc aaccagtggc
tctgggatat tatcgatgag ttcatctacc agtttcagtc attcagtcag taccgctgta
                                                                    660
agactgccaa gaagtcagag gaggagattg actttcttcg ttccaatccc aaaatctgga
                                                                    720
atgttcatag tgtcctcaat gtccttcatt ccctggtaga caaatccaac atcaaccgac
                                                                    780
agttggaggt atacacaagc ggaggtgacc ctgagagtgt ggctggggag tatgggcggc
                                                                    840
                                                                    900
actccctcta caaaatgctt ggttacttca gcctggtcgg gcttctccgc ctgcactccc
tgttaggaga ttactaccag gccatcaagg tgctggagaa catcgaactg aacaagaaga
                                                                    960
gtatgtattc ccgtgtgcca gagtgccagg tcaccacata ctattatgtt gggtttgcat
                                                                   1020
atttgatgat gcgtcgttac caggatgcca tccgggtctt cgccaacatc ctcctctaca
                                                                   1080
tccagaggac caagagcatg ttccagagga ccacgtacaa gtatgagatg attaacaagc
                                                                   1140
agaatgagca gatgcatgcg ctgctggcca ttgccctcac gatgtacccc atgcgtatyg
                                                                   1200
atgagagcat tcacctccag ctgcgggaga aatatgggga caagatgttg cgcatgcaga
                                                                   1260
aaggtgaccc acaagtctat gaagaacttt tcagttactc ctgccccaag ttcctgtcgc
                                                                   1320
ctgtagtgcc caactatgat aatgtgcacc ccaactacca caaagagccc ttcctgcagc
                                                                   1380
agctgaaggt gttttctgat gaagtacagc agcaggccca gctttcaacc atccgcagct
                                                                   1440
tcctgaagct ctacaccacc atgcctgtgg ccaagctggc tggcttcctg gacctcacag
                                                                   1500
agcaggagtt ccggatccag cttcttgtct tcaaacacaa gatgaagaac ctcgtgtgga
                                                                   1560
ccagcggtat ctcagccctg gatggtgaat ttcagtcagc ctcagaggtt gacttctaca
                                                                   1620
ttgataagga catgatccac atcgcggaca ccaaggtcgc caggcgttat ggggatttct
                                                                   1680
tcatccgtca gatccacaaa tttgaggagc ttaatcgaac cctgaagaag atgggacaga
                                                                   1740
                                                                   1800
gaccttgatg atattcacac acattcagga acctgttttg atgtattata ggcaggaagt
                                                                   1860
gtttttgcta ccgtgaaacc tttacctaga tcagccatca gcctgtcaac tcagttaaca
                                                                   1920
agttaaggac cgaagtgttt caagtggatc tcagtaaagg atctttggag ccagaaaaaa
                                                                   1963
<210> 1149
<211> 808
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (794)
<223> n equals a,t,g, or c
<400> 1149
                                                                     60
gaattcggca cgagaaaaga cctcatttat aataaggtca ctccaacatt tcaccactgg
                                                                    120
aagattgatg acaagaagtt tggtcttacg tttcaaagtc ctgctgatgc tagggctttt
                                                                    180
gatagaggta tccgaagagc tatagaggat atttctcaag gatgccccga atcaaaaaat
gaagctgaag gggcagatga cttacaagca aatgaagagg attcttccag ttctctagtg
                                                                    240
                                                                    300
aaggatcacc tttttcagca agagacagtt gttaccagtg agccttatag aagctcaaat
                                                                    360
aatcagataa catttggtca gccaggcttg gacattcaga gcagaagtat ggaatacgta
                                                                    420
cagcggcaaa tatccaagga atgtggaagc ctaaagtccc aaaatagggt ccctttgaaa
                                                                    480
tcaatcagac atgtcagctt tcaagatgag gatgagattg tcagaataaa ccctcgagat
                                                                    540
atcttaatac gtcgctatgc agactacaga catcctgaca tgtggaaaaa tgacttggaa
                                                                    600
agagatgatg ctgattccag tattcagttt tctaaaccag acagtaaaaa atcagactat
                                                                    660
ctgtactctt gtggggatga gactaagtta agttcaccca aagactctgt ggtatttaag
                                                                    720
acgcagcctt cctcattaaa aattaagagt caaaacgagg aaaagaggat ggtgaacgtt
                                                                    780
                                                                    808
ctcgttgcgt atanggccag gaaagttt
<210> 1150
<211> 1036
<212> DNA
```

```
<213> Homo sapiens
<400> 1150
                                                                     60
ggcacgaggc ggcttctacg ctccggcact ctgagttcat cagcaaacgc cctggcgtct
                                                                    120
qtcctcacca tgcctagcct ttgggaccgc ttctcgtcgt cgtccacctt ccagctgacc
ctcgtgctgc gcctggactc acgactctgg cccaagatcc aggggctgtt tagctccgcc
                                                                    180
                                                                    240
aactctccct tcctccctgg cttcagccag tccctgacgc tgagcactgg cttccgagtc
                                                                    300
atcaagaaga agctgtacag ctcggaacag ctgctcattg aggagtgttg aacttcaacc
                                                                    360
tgagggggcc gacagtgccc tccaagacag agacgactga acttttgggg tggagactag
                                                                    420
aggcaggagc tgagggactg attcctgtgg ttggaaaact gaggcagcca cctaaggtgg
                                                                    480
aggtggggga atagtgtttc ccaggaagct cattgagttg tgtgcgggtg gctgtgcatt
                                                                    540
ggggacacat acccctcagt actgtagcat gaaacaaagg cttaggggcc aacaaggctt
                                                                    600
ccagctggat gtatgtgtag catgtacctt attatttttg ttactgacag ttaacagtgg
                                                                    660
tgtgacatcc agagagcagc tgggctgctc ccgccccagc ccggcccagg gtgaaggaag
aggcacgtgc tcctcagagc agccggaggg aggggggagg tcggaggtcg tggaggtggt
                                                                    720
                                                                    780
ttgtgtatca cttgggatct ttgacacttg aaaaattaca cctggcagct gcgtttaagc
                                                                    840
cttcccccat cgtgtactgc agagttgagc tggcagggga ggggctgaga gggtgggggc
                                                                    900
tggaacccct ccccgggagg agtgccatct gggtcttcca tctagaactg tttacatgaa
                                                                    960
gataagatac tcactgttca tgaatacact tgatgttcaa gtattaagac ctatgcaata
                                                                   1020
1036
aaaaaaaaa aaaaaa
<210> 1151
<211> 938
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (3)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (28)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (41)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (43)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (48)
<223> n equals a,t,g, or c
<400> 1151
                                                                      60
ttnaagggga gggggactaa tgtaatgnca ctgccctata ntnaggtncg cctgcaggta
                                                                     120
ccggtccgga attcccgggt cgacccacgc gtccgagaaa ctgcgcaact gcagttcgcc
                                                                     180
tggcctgcct agcaggcgag ctccgttgca cgctgagcga tgactgcatt ccactcacgt
ggcgctgcga cggccaccca gactgtcccg actccagcga cgagctcggc tgtggaacca
                                                                     240
                                                                     300
atgagatect ceeggaaggg gatgecaeaa ceatggggee ceetgtgaee etggagagtg
                                                                     360
tcacctctct caggaatgcc acaaccatgg ggccccctgt gaccctggag agtgtcccct
                                                                     420
ctgtcgggaa tgccacatcc tcctctgccg gagaccagtc tggaagccca actgcctatg
                                                                     480
gggttattgc agctgctgcg gtgctcagtg caagcctggt caccgccacc ctcctccttt
```

| tatectaact | ccgagcccag | gagegeetee | gcccactggg | gttactggtg | gccatgaagg | 540 |
|--|---|--|---|---|---|--|
| | gctgtcagaa | | | | | 600 |
| | gccctgggcg | | | | | 660 |
| | gccctcagag | | | | | 720 |
| | gtggccctgg | | | | | 780 |
| | gggaacctgc | | | | | 840 |
| | ggccctgtgc | | | | | 900 |
| | catcctcaaa | | | cgcccgaggg | cggcgaccaa | 938 |
| agttgettea | caccecaaa | addaddadda | aaaaaaaa | | | 230 |
| <210> 1152 | | | | | | |
| <211> 902 | | | | | | |
| <211> 902 <212> DNA | | | | | | |
| <213> Homo | canione | | | | | |
| \213> 1101110 | sapiens | | | | | |
| <400> 1152 | | | | | | |
| | gacacactag | taacctcaaa | tractgatag | taatacctcc | teettacett | 60 |
| | tgtagccctc | | | | | 120 |
| | ctgaactcac | | | | | 180 |
| - | ccaatctccg | | | | | 240 |
| | | | | | | 300 |
| | ctgtgggcat | | | | | 360 |
| | atgtggagtc | | | | | 420 |
| | gggtggatgg | | | | | 480 |
| | gccaagcaca | | | | | |
| | ctcaggtgag | | | | | 540 |
| | tgtgggtggg | | | | | 600 |
| | ctggggccag | | | | | 660 |
| | agggacaaca | | | | | 720 |
| | aagcctatct | | | | | 780 |
| gtgttgaggt | ttctgcaaag | | | | | 840 |
| | | ~~~++~~~~ | + ~ ~ ~ + ~ + + ~ ~ | 2++4222222 | 22222222 | 900 |
| catccccctt | ggcaggtggg | ggcttaggca | tecatatigg | attcaaaaaa | aaaaaaaaa | 900 |
| catccccctt aa | ggcaggtggg | ggcttaggca | tecatatigg | acccaaaaaa | aaaaaaaaaa | 902 |
| aa | ggcaggtggg | ggettaggea | cccacaccgg | acccaaaaa | aaaaaaaaaa | |
| | ggcaggtggg | ggcttaggca | tecatattgg | acccaaaaa | aaaaaaaaa | |
| aa <210> 1153 <211> 1044 | ggcaggtggg | ggettaggea | tecatattgg | acccaaaaa | aaaaaaaaa | |
| aa <210> 1153 | ggcaggtggg | ggettaggea | cccatattgg | acccaaaaa | aaaaaaaaa | |
| aa <210> 1153 <211> 1044 | | ggettaggea | ccatatigg | acccaaaaa | aaaaaaaaa | |
| <pre><210> 1153 <211> 1044 <212> DNA <213> Homo</pre> | | ggettaggea | ccatatigg | acccaaaaa | aaaaaaaaa | |
| <pre>aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153</pre> | sapiens | | | | | 902 |
| <pre>aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc</pre> | sapiens acgagagraa | agcacattgt | catctttaat | cctttccatt | tatttgcctc | 902 |
| <pre>aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg</pre> | sapiens acgagagraa acctttatat | agcacattgt ttttgctttt | catctttaat tgacaatttc | cctttccatt tacctgaggc | tatttgcctc atgatgtaac | 902 60 120 |
| <pre>aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg taaaatttct</pre> | sapiens acgagagraa acctttatat aacatgatag | agcacattgt ttttgctttt tggtagttct | catctttaat tgacaatttc ctggattaat | cctttccatt tacctgaggc ttatgctcat | tatttgcctc atgatgtaac ggttttgctt | 902 60 120 180 |
| <pre>aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg taaaatttct tgtttctccc</pre> | sapiens acgagagraa acctttatat aacatgatag ttaccaaaat | agcacattgt ttttgctttt tggtagttct gctctttca | catctttaat tgacaatttc ctggattaat gtattacaca | cctttccatt tacctgaggc ttatgctcat agaaaaagat | tatttgcctc atgatgtaac ggttttgctt catgatttgc | 902 60 120 180 240 |
| <pre>aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg taaaatttct tgtttctccc</pre> | sapiens acgagagraa acctttatat aacatgatag | agcacattgt ttttgctttt tggtagttct gctctttca | catctttaat tgacaatttc ctggattaat gtattacaca | cctttccatt tacctgaggc ttatgctcat agaaaaagat | tatttgcctc atgatgtaac ggttttgctt catgatttgc | 902 60 120 180 240 300 |
| aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg taaaatttct tgtttctccc atcatgatgt | sapiens acgagagraa acctttatat aacatgatag ttaccaaaat | agcacattgt ttttgctttt tggtagttct gctctttca tttcatgtat | catctttaat tgacaatttc ctggattaat gtattacaca gatcgtgttt | cctttccatt tacctgaggc ttatgctcat agaaaaagat cctgttccat | tatttgcctc atgatgtaac ggttttgctt catgatttgc cacatttctg | 902 60 120 180 240 300 360 |
| aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg taaaatttct tgtttctccc atcatgatgt gcattttttt ggttgagaaa | sapiens acgagagraa acctttatat aacatgatag ttaccaaaat acatagcaaa taacccactg tcaagggtag | agcacattgt ttttgctttt tggtagttct gctctttca tttcatgtat ggacattagg tggtagatgg | catctttaat tgacaatttc ctggattaat gtattacaca gatcgtgttt atgtcataac aggctgacag | cctttccatt tacctgaggc ttatgctcat agaaaaagat cctgttccat ataattggat acaccttcca | tatttgcctc atgatgtaac ggttttgctt catgatttgc cacatttctg gttagacata gatccacttt | 902 60 120 180 240 300 360 420 |
| aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg taaaatttct tgtttctccc atcatgatgt gcattttttt ggttgagaaa | sapiens acgagagraa acctttatat aacatgatag ttaccaaaat acatagcaaa taacccactg | agcacattgt ttttgctttt tggtagttct gctctttca tttcatgtat ggacattagg tggtagatgg | catctttaat tgacaatttc ctggattaat gtattacaca gatcgtgttt atgtcataac aggctgacag | cctttccatt tacctgaggc ttatgctcat agaaaaagat cctgttccat ataattggat acaccttcca | tatttgcctc atgatgtaac ggttttgctt catgatttgc cacatttctg gttagacata gatccacttt | 902 60 120 180 240 300 360 |
| aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg taaaatttct tgtttctccc atcatgatgt gcattttttt ggttgagaaa agaggtactg | sapiens acgagagraa acctttatat aacatgatag ttaccaaaat acatagcaaa taacccactg tcaagggtag | agcacattgt ttttgctttt tggtagttct gctctttca tttcatgtat ggacattagg tggtagatgg aaccagttat | catctttaat tgacaatttc ctggattaat gtattacaca gatcgtgttt atgtcataac aggctgacag gtaatttgca | cctttccatt tacctgaggc ttatgctcat agaaaaagat cctgttccat ataattggat acaccttcca tgtggtcata | tatttgcctc atgatgtaac ggttttgctt catgatttgc cacatttctg gttagacata gatccacttt tagctagttg | 902 60 120 180 240 300 360 420 |
| aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg taaaatttct tgtttctccc atcatgatgt gcattttttt ggttgagaaa agaggtactg gtggccaaat | sapiens acgagagraa acctttatat aacatgatag ttaccaaaat acatagcaaa taacccactg tcaagggtag agtattccta | agcacattgt ttttgctttt tggtagttct gctctttca tttcatgtat ggacattagg tggtagatgg aaccagttat acatgtatgt | catctttaat tgacaatttc ctggattaat gtattacaca gatcgtgttt atgtcataac aggctgacag gtaatttgca gagtatcatt | cctttccatt tacctgaggc ttatgctcat agaaaaagat cctgttccat ataattggat acaccttcca tgtggtcata ctatcatcta | tatttgcctc atgatgtaac ggttttgctt catgatttgc cacatttctg gttagacata gatccacttt tagctagttg tctatctact | 902 60 120 180 240 300 360 420 480 540 600 |
| aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg taaaatttct tgtttctccc atcatgatgt gcatttttt ggttgagaaa agaggtactg gtggccaaat tattgacaga | sapiens acgagagraa acctttatat aacatgatag ttaccaaaat acatagcaaa taacccactg tcaagggtag agtattccta cagggataca | agcacattgt ttttgctttt tggtagttct gctctttca tttcatgtat ggacattagg tggtagatgg aaccagttat acatgtatgt | catctttaat tgacaatttc ctggattaat gtattacaca gatcgtgttt atgtcataac aggctgacag gtaatttgca gagtatcatt gtaaatgatt | cctttccatt tacctgaggc ttatgctcat agaaaaagat cctgttccat ataattggat acaccttcca tgtggtcata ctatcatcta accctttgat | tatttgcctc atgatgtaac ggttttgctt catgatttgc cacatttctg gttagacata gatccacttt tagctagttg tctatctact | 902 60 120 180 240 300 360 420 480 540 |
| aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg taaaatttct tgtttctccc atcatgatgt gcatttttt ggttgagaaa agaggtactg gtggccaaat tattgacaga tcacaaacac | sapiens acgagagraa acctttatat aacatgatag ttaccaaaat acatagcaaa taacccactg tcaagggtag agtattccta cagggataca taagaatata | agcacattgt ttttgctttt tggtagttct gctctttca tttcatgtat ggacattagg tggtagatgg aaccagttat acatgtatgt cttgctttgt | catctttaat tgacaatttc ctggattaat gtattacaca gatcgtgttt atgtcataac aggctgacag gtaatttgca gagtatcatt gtaaatgatt acctacctgt | cctttccatt tacctgaggc ttatgctcat agaaaaagat cctgttccat ataattggat acaccttcca tgtggtcata ctatcatcta accctttgat ctgatgatgg | tatttgcctc atgatgtaac ggttttgctt catgatttgc cacatttctg gttagacata gatccacttt tagctagttg tctatctact tttgtggttg tggtagtgat | 902 60 120 180 240 300 360 420 480 540 600 |
| aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg taaaatttct tgtttctccc atcatgatgt gcatttttt ggttgagaaa agaggtactg gtggccaaat tattgacaga tcacaaacac gatgatgatg | sapiens acgagagraa acctttatat aacatgatag ttaccaaaat acatagcaaa taacccactg tcaagggtag agtattccta cagggataca taagaatata atgaaactat | agcacattgt ttttgctttt tggtagttct gctctttca tttcatgtat ggacattagg tggtagatgg aaccagttat acatgtatgt cttgctttgt tcatggatgg aggatataac | catctttaat tgacaatttc ctggattaat gtattacaca gatcgtgttt atgtcataac aggctgacag gtaatttgca gagtatcatt gtaaatgatt acctacctgt cactattctt | cctttccatt tacctgaggc ttatgctcat agaaaaagat cctgttccat ataattggat acaccttcca tgtggtcata ctatcatcta accctttgat ctgatgatgg taacccttga | tatttgcctc atgatgtaac ggttttgctt catgatttgc cacatttctg gttagacata gatccacttt tagctagttg tctatctact tttgtggttg tggtagtgat aactgaggtg | 902 60 120 180 240 300 360 420 480 540 600 660 |
| aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg taaaatttct tgtttctccc atcatgatgt gcatttttt ggttgagaaa agaggtactg gtggccaaat tattgacaga tcacaaacac gatgatgatg | sapiens acgagagraa acctttatat aacatgatag ttaccaaaat acatagcaaa taacccactg tcaagggtag agtattccta cagggataca taagaatata atgaaactat atgttatcct | agcacattgt ttttgctttt tggtagttct gctctttca tttcatgtat ggacattagg tggtagatgg aaccagttat acatgtatgt cttgctttgt tcatggatgg aggatataac ccaagctcac | catctttaat tgacaatttc ctggattaat gtattacaca gatcgtgttt atgtcataac aggctgacag gtaatttgca gagtatcatt gtaaatgatt acctacctgt cactattctt atagataaca | cctttccatt tacctgaggc ttatgctcat agaaaaagat cctgttccat ataattggat acaccttcca tgtggtcata ctatcatcta accctttgat ctgatgatgg taacccttga agtttgcagg | tatttgcctc atgatgtaac ggttttgctt catgatttgc cacatttctg gttagacata gatccacttt tagctagttg tctatctact tttgtggttg tggtagtgat aactgaggtg gctagaaatc | 902 60 120 180 240 300 360 420 480 540 600 660 720 |
| aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg taaaatttct tgtttctccc atcatgatgt gcatttttt ggttgagaaa agaggtactg gtggccaaat tattgacaga tcacaaacac gatgatgatg cataaggtac ttactgagtt | sapiens acgagagraa acctttatat aacatgatag ttaccaaaat acatagcaaa taacccactg tcaagggtag agtattccta cagggataca taagaatata atgaaactat atgttatcct aataattcgc | agcacattgt ttttgctttt tggtagttct gctctttca tttcatgtat ggacattagg tggtagatgg aaccagttat acatgtatgt cttgctttgt tcatggatgg aggatataac ccaagctcac tgcagacttt | catctttaat tgacaatttc ctggattaat gtattacaca gatcgtgttt atgcataac aggctgacag gtaatttgca gagtatcatt gtaaatgatt acctacctgt cactattctt atagataaca cagagagaga | cctttccatt tacctgaggc ttatgctcat agaaaaagat cctgttccat ataattggat acaccttcca tgtggtcata ctatcatcta accctttgat ctgatgatgg taacccttga agtttgcagg gagagaggat | tatttgcctc atgatgtaac ggttttgctt catgatttgc cacatttctg gttagacata gatccacttt tagctagttg tctatctact tttgtggttg tggtagtgat aactgaggtg gctagaaatc gcttagtgtg | 902 60 120 180 240 300 360 420 480 540 600 660 720 780 |
| aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg taaaatttct tgtttctccc atcatgatgt gcatttttt ggttgagaaa agaggtactg gtggccaaat tattgacaga tcacaaacac gatgatgatg cataaggtac tactgagtt ccatatctta | sapiens acgagagraa acctttatat aacatgatag ttaccaaaat acatagcaaa taacccactg tcaagggtag agtattccta cagggataca taagaatata atgaaactat atgttatcct aataattcgc tcatctgaaa cgtctaacaa | agcacattgt ttttgctttt tggtagttct gctctttca tttcatgtat ggacattagg tggtagatgg aaccagttat acatgtatgt cttgctttgt tcatggatgg aggatataac ccaagctcac tgcagacttt tggctaatga | catctttaat tgacaatttc ctggattaat gtattacaca gatcgtgttt atgtcataac aggctgacag gtaatttgca gagtatcatt gtaaatgatt acctacctgt cactattctt atagataaca cagagagaga atctttaaag | cctttccatt tacctgaggc ttatgctcat agaaaaagat cctgttccat ataattggat acaccttcca tgtggtcata ctatcatcta accctttgat ctgatgatgg taacccttga agtttgcagg gagagaggat agaggactac | tatttgcctc atgatgtaac ggttttgctt catgatttgc cacatttctg gttagacata gatccacttt tagctagttg tctatctact tttgtggttg tggtagtgat aactgaggtg gctagaaatc gcttagtgtg tccctagaca | 902 60 120 180 240 300 360 420 480 540 600 660 720 780 840 |
| aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg taaaatttct tgtttctccc atcatgatgt gcatttttt ggttgagaaa agaggtactg gtggccaaat tattgacaga tcacaaacac gatgatgatg cataaggtac tactgagtt ccatatctta tgagcgtgtt | sapiens acgagagraa acctttatat aacatgatag ttaccaaaat acatagcaaa taacccactg tcaagggtag agtattccta cagggataca taagaatata atgaaactat atgttatcct aataattcgc tcatctgaaa cgtctaacaa aggactctgt | agcacattgt ttttgctttt tggtagttct gctctttca tttcatgtat ggacattagg tggtagatgg aaccagttat acatgtatgt cttgctttgt tcatggatgg aggatataac ccaagctcac tgcagacttt tggctaatga tcccatttct | catctttaat tgacaatttc ctggattaat gtattacaca gatcgtgttt atgtcataac aggctgacag gtaatttgca gagtatcatt gtaaatgatt acctacctgt cactattctt atagataaca cagagagaga atctttaaag acacatttat | cctttccatt tacctgaggc ttatgctcat agaaaaagat cctgttccat ataattggat acaccttcca tgtggtcata ctatcatcta accctttgat ctgatgatgg taacccttga agtttgcagg gagagaggat agaggactac gcttatatga | tatttgcctc atgatgtaac ggttttgctt catgatttgc cacatttctg gttagacata gatccactt tagctagttg tctatctact tttgtggttg tggtagtgat aactgaggtg gctagaaatc gcttagtgtg tccctagaca gggccattga | 902 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg taaaatttct tgtttctccc atcatgatgt gcatttttt ggttgagaaa agaggtactg gtggccaaat tattgacaga tcacaaacac gatgatgatg cataaggtac tactgagtt ccatatctta tgagcgtgtt ttggccaatt | sapiens acgagagraa acctttatat aacattgatag ttaccaaaat acatagcaaa taacccactg tcaagggtag agtattccta cagggataca taagaatata atgaaactat atgttatcct aataattcgc tcatctgaaa cgtctaacaa aggactctgt ttagcatttc | agcacattgt ttttgctttt tggtagttct gctctttca tttcatgtat ggacattagg tggtagatgg aaccagttat acatgtatgt cttgctttgt tcatggatgg aggatataac ccaagctcac tgcagacttt tggctaatga tcccatttct | catctttaat tgacaatttc ctggattaat gtattacaca gatcgtgttt atgtcataac aggctgacag gtaatttgca gagtatcatt gtaaatgatt acctacctgt cactattctt atagataaca cagagagaga atctttaaag acacatttat | cctttccatt tacctgaggc ttatgctcat agaaaaagat cctgttccat ataattggat acaccttcca tgtggtcata ctatcatcta accctttgat ctgatgatgg taacccttga agtttgcagg gagagaggat agaggactac gcttatatga | tatttgcctc atgatgtaac ggttttgctt catgatttgc cacatttctg gttagacata gatccactt tagctagttg tctatctact tttgtggttg tggtagtgat aactgaggtg gctagaaatc gcttagtgtg tccctagaca gggccattga | 902 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 |
| aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg taaaatttct tgtttctccc atcatgatgt gcatttttt ggttgagaaa agaggtactg gtggccaaat tattgacaga tcacaaacac gatgatgatg cataaggtac tactgagtt ccatatctta tgagcgtgtt ttggccaatt | sapiens acgagagraa acctttatat aacatgatag ttaccaaaat acatagcaaa taacccactg tcaagggtag agtattccta cagggataca taagaatata atgaaactat atgttatcct aataattcgc tcatctgaaa cgtctaacaa aggactctgt | agcacattgt ttttgctttt tggtagttct gctctttca tttcatgtat ggacattagg tggtagatgg aaccagttat acatgtatgt cttgctttgt tcatggatgg aggatataac ccaagctcac tgcagacttt tggctaatga tcccatttct | catctttaat tgacaatttc ctggattaat gtattacaca gatcgtgttt atgtcataac aggctgacag gtaatttgca gagtatcatt gtaaatgatt acctacctgt cactattctt atagataaca cagagagaga atctttaaag acacatttat | cctttccatt tacctgaggc ttatgctcat agaaaaagat cctgttccat ataattggat acaccttcca tgtggtcata ctatcatcta accctttgat ctgatgatgg taacccttga agtttgcagg gagagaggat agaggactac gcttatatga | tatttgcctc atgatgtaac ggttttgctt catgatttgc cacatttctg gttagacata gatccactt tagctagttg tctatctact tttgtggttg tggtagtgat aactgaggtg gctagaaatc gcttagtgtg tccctagaca gggccattga | 902 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 |
| aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg taaaatttct tgtttctccc atcatgatgt gcatttttt ggttgagaaa agaggtactg gtggccaaat tattgacaga tcacaaacac gatgatgatg cataaggtac tactgagtt ccatatctta tgagcgtgtt ttggccaatt aaaaaaaaaa | sapiens acgagagraa acctttatat aacattgatag ttaccaaaat acatagcaaa taacccactg tcaagggtag agtattccta cagggataca taagaatata atgaaactat atgttatcct aataattcgc tcatctgaaa cgtctaacaa aggactctgt ttagcatttc | agcacattgt ttttgctttt tggtagttct gctctttca tttcatgtat ggacattagg tggtagatgg aaccagttat acatgtatgt cttgctttgt tcatggatgg aggatataac ccaagctcac tgcagacttt tggctaatga tcccatttct | catctttaat tgacaatttc ctggattaat gtattacaca gatcgtgttt atgtcataac aggctgacag gtaatttgca gagtatcatt gtaaatgatt acctacctgt cactattctt atagataaca cagagagaga atctttaaag acacatttat | cctttccatt tacctgaggc ttatgctcat agaaaaagat cctgttccat ataattggat acaccttcca tgtggtcata ctatcatcta accctttgat ctgatgatgg taacccttga agtttgcagg gagagaggat agaggactac gcttatatga | tatttgcctc atgatgtaac ggttttgctt catgatttgc cacatttctg gttagacata gatccactt tagctagttg tctatctact tttgtggttg tggtagtgat aactgaggtg gctagaaatc gcttagtgtg tccctagaca gggccattga | 902 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 |
| aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg taaaatttct tgtttctccc atcatgatgt gcatttttt ggttgagaaa agaggtactg gtggccaaat tattgacaga tcacaaacac gatgatgatg cataaggtac tactgagtt ccatatctta tgagcgtgtt ttggccaatt | sapiens acgagagraa acctttatat aacattgatag ttaccaaaat acatagcaaa taacccactg tcaagggtag agtattccta cagggataca taagaatata atgaaactat atgttatcct aataattcgc tcatctgaaa cgtctaacaa aggactctgt ttagcatttc | agcacattgt ttttgctttt tggtagttct gctctttca tttcatgtat ggacattagg tggtagatgg aaccagttat acatgtatgt cttgctttgt tcatggatgg aggatataac ccaagctcac tgcagacttt tggctaatga tcccatttct | catctttaat tgacaatttc ctggattaat gtattacaca gatcgtgttt atgtcataac aggctgacag gtaatttgca gagtatcatt gtaaatgatt acctacctgt cactattctt atagataaca cagagagaga atctttaaag acacatttat | cctttccatt tacctgaggc ttatgctcat agaaaaagat cctgttccat ataattggat acaccttcca tgtggtcata ctatcatcta accctttgat ctgatgatgg taacccttga agtttgcagg gagagaggat agaggactac gcttatatga | tatttgcctc atgatgtaac ggttttgctt catgatttgc cacatttctg gttagacata gatccactt tagctagttg tctatctact tttgtggttg tggtagtgat aactgaggtg gctagaaatc gcttagtgtg tccctagaca gggccattga | 902 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 |
| aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg taaaatttct tgtttctccc atcatgatgt gcatttttt ggttgagaaa agaggtactg gtggccaaat tattgacaga tcacaaacac gatgatgatg cataaggtac tactgagtt ccatatctta tgagcgtgtt ttggccaatt aaaaaaaaaa | sapiens acgagagraa acctttatat aacattgatag ttaccaaaat acatagcaaa taacccactg tcaagggtag agtattccta cagggataca taagaatata atgaaactat atgttatcct aataattcgc tcatctgaaa cgtctaacaa aggactctgt ttagcatttc | agcacattgt ttttgctttt tggtagttct gctctttca tttcatgtat ggacattagg tggtagatgg aaccagttat acatgtatgt cttgctttgt tcatggatgg aggatataac ccaagctcac tgcagacttt tggctaatga tcccatttct | catctttaat tgacaatttc ctggattaat gtattacaca gatcgtgttt atgtcataac aggctgacag gtaatttgca gagtatcatt gtaaatgatt acctacctgt cactattctt atagataaca cagagagaga atctttaaag acacatttat | cctttccatt tacctgaggc ttatgctcat agaaaaagat cctgttccat ataattggat acaccttcca tgtggtcata ctatcatcta accctttgat ctgatgatgg taacccttga agtttgcagg gagagaggat agaggactac gcttatatga | tatttgcctc atgatgtaac ggttttgctt catgatttgc cacatttctg gttagacata gatccactt tagctagttg tctatctact tttgtggttg tggtagtgat aactgaggtg gctagaaatc gcttagtgtg tccctagaca gggccattga | 902 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 |
| aa <210> 1153 <211> 1044 <212> DNA <213> Homo <400> 1153 cgggattcgc ttgatagatg taaaattct tgtttctccc atcatgatgt gcatttttt ggttgagaaa agaggtactg gtggccaaat tattgacaga tcacaaacac gatgatgatg cataaggtac tactgagtt catatctta tgagcgtgtt ttggccaatt atgagcgtgt ttggccaatt atgagcgtgt c210> 1154 <211> 1417 | sapiens acgagagraa acctttatat aacattgatag ttaccaaaat acatagcaaa taacccactg tcaagggtag agtattccta cagggataca taagaatata atgaaactat atgttatcct aataattcgc tcatctgaaa cgtctaacaa aggactctgt ttagcatttc aaaaaaaaac | agcacattgt ttttgctttt tggtagttct gctctttca tttcatgtat ggacattagg tggtagatgg aaccagttat acatgtatgt cttgctttgt tcatggatgg aggatataac ccaagctcac tgcagacttt tggctaatga tcccatttct | catctttaat tgacaatttc ctggattaat gtattacaca gatcgtgttt atgtcataac aggctgacag gtaatttgca gagtatcatt gtaaatgatt acctacctgt cactattctt atagataaca cagagagaga atctttaaag acacatttat | cctttccatt tacctgaggc ttatgctcat agaaaaagat cctgttccat ataattggat acaccttcca tgtggtcata ctatcatcta accctttgat ctgatgatgg taacccttga agtttgcagg gagagaggat agaggactac gcttatatga | tatttgcctc atgatgtaac ggttttgctt catgatttgc cacatttctg gttagacata gatccactt tagctagttg tctatctact tttgtggttg tggtagtgat aactgaggtg gctagaaatc gcttagtgtg tccctagaca gggccattga | 902 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 |

```
<220>
<221> SITE
<222> (551)
<223> n equals a,t,g, or c
<400> 1154
ggcagagctc ggcatcactc gcccagtgcc aaccaacact tgtgtcatct tgggcttggc
                                                                       60
tggaggtgtt atcatttata tcatgaagca ctcgttgagc gtgggggagg tgatcgaagt
                                                                      120
cctggaagtc cttctgatct tcgtttatct caacatgatc ctgctgtacc tgctgccccg
                                                                      180
                                                                      240
ctgcttcacc cctggtgagg cactgctggt attgggtggc attagctttg tcctcaacca
                                                                      300
gctcatcaag cgctctctga cactggtgga aagtcagggg gacccagtgg acttcttcct
gctggtggtg gtagtaggga tggtactcat gggcattttc ttcagcactc tgtttgtctt
                                                                      360
catggactca ggcacctggg cctcctccat cttcttccac ctcatgacct gtgtgctgag
                                                                      420
cettggtgtg gtectacect ggetgeaceg gsteateege agaateeect getetggett
                                                                      480
cttcagtttc tcttccagac agacacccgc atctacctcc tagcctattg gtctctgctg
                                                                      540
                                                                      600
gccaccttgg nctgcctggt ggtgctgtac cagaatgcca agcggtcatc ttccgagtcc
                                                                      660
aagaagcacc aggccccac catcgcccga aagtatttcc acctcattgt ggtagccacc
                                                                      720
tacatcccag gtatcatctt tgaccggcca ctgctctatg tagccgccac tgtatgcctg
geggtettea tetteetgga gtatgtgege taetteegea teaageettt gggteacaet
                                                                      780
ytacggagct tcctgtccct ttttctggat gaacgagaca gtggaccact cattctgaca
                                                                      840
                                                                      900
cacatctacc tgctcctggg catgtctctt cccatctggc tgatccccag accctgcaca
                                                                      960
cagaagggta gcctgggagg agccagggcc ctcgtcccct atgccggtgt cctggctgtg
ggtgtgggtg atactgtggc ctccatcttc ggtagcacca tgggggagat ccgctggcct
                                                                     1020
                                                                     1080
ggaaccmaaa agacttttga ggggaccatg acatctatat ttgcgcagat catttctgta
                                                                     1140
gctctgatct taatctttga cagtggagtg gacctaaact acagttatgc ttggattttg
gggtccatca gcactgtgtc cctcctggaa gcatacacta cacagataga caatctcctt
                                                                     1200
ctgcctctct acctcctgat attgctgatg gcctagctgt tacagtgcag cagcagtgac
                                                                     1260
ggaggaaaca gacatgggga gggtgaacag tccccacagc agacagctac ttgggcatga
                                                                     1320
agagccaagg tgtgaaaagc agatttgatt tttcagttga ttcagattta aaataaaaag
                                                                     1380
caaagctctc ctaaaaaaaa aaaaaaaaaa aactcga
                                                                     1417
<210> 1155
<211> 1377
<212> DNA
<213> Homo sapiens
<400> 1155
ttggcagtcc cctgacaccc taagaccggc atctgtcgat gttatttccc cagcatggcc
                                                                       60
gaaacagaag ccctgtcgaa gcttcgggaa gacttcagga tgcagaataa atccgtcttt
                                                                      120
attttgggcg ccacggagaa accggcagag tgctcttaaa ggaaatcctg gagcagggcc
                                                                      180
tgttttccaa agtcacgctc attggccgga gaagctcacc ttcgacgagg aagcttataa
                                                                      240
aaatgtgaat caagaagtgg tggactttga aaagttggat gactacgcct ctgcctttca
                                                                      300
aggtcatgat gttggattct gttgcctggg taccaccaga gggaaagctg gggcggaggg
                                                                      360
atttgttcgt gttgaccgag attatgtgct gaagtctgca gagctggcaa aagctggagg
                                                                      420
gtgcaaacat ttcaacttgc tatcctctaa aggagctgat aaatcaagca atttttata
                                                                      480
tctacaagtt aagggagaag tagaagccaa ggttgaagaa ttaaaatttg atcgttactc
                                                                      540
tgtatttagg cctggagttc tgttatgtga taggcaagaa tctcgcccag gtgaatggct
                                                                      600
ggttagaaag ttctttggct ccttaccaga ctcttgggcc agtgggcatt ctgtgcctgt
                                                                      660
ggtgaccgtg gttagagcaa tgctgaacaa tgtggtgaga ccaagagaca agcagatgga
                                                                      720
actgctggag aacaaggcca tccatgacct ggggaaagcg catggctctc tcaagccatg
                                                                      780
accacattgg agaaatggtt tttattgtca accttaacac ccatcaccaa atcggtaatt
                                                                      840
                                                                      900
tcagggtcta aaaaaagtca gcatgtttta actttgttgt tttactatcc tcaggcatcc
attccaatca agaaatgatg gtgctctgca tcagtggttc agagcctggt tatacatata
                                                                      960
gatcactcag ggagctttgg aaaaataaag atttgtcagc cctatctcaa acttgaatca
                                                                     1020
aaatttctgg ggtgtgggca caataatctg taattttctt tgtttatact tcccctgatg
                                                                     1080
ccactggttc cgatgccact ggctgggggg cctgctttga aatgcttgtc tgcagagtca
                                                                     1140
cagcagccat gaaaacctta tgaccgtgca aatgagctct gctctaaaat tgttgacatt
                                                                     1200
catgtctctg agttacaaaa gtgctaattc actacatgta attgtgtaag taaacattgt
                                                                     1260
gcctttacta cttctttatg taatagaagt tatataccta agcttatata atacatgggg
                                                                     1320
aggattaaat aaaggaataa agatgaatgg acaaaaaaaa aaaaaaaaa aaaaaaa
                                                                     1377
```

```
<210> 1156
<211> 905
<212> DNA
<213> Homo sapiens
<400> 1156
ccacgcgtcc ggggatcagc gctaccaagg cgcacgagtt ctgcccccta cgattggttc
                                                                 60
ggggacttct cctccttccg tgccctccta gagccggagc tgcggcccga ggaccgtatc
                                                                120
cttgtgctag gttgcgggaa cagtgccctg agctacgagc tgttcctcgg aggcttccct
                                                                180
aatgtgacca gtgtggacta ctcatcagtc gtggtggctg ccatgcaggc tcgctatgcc
                                                                240
catgtgccgc agctgcgctg gggagaccat ggatgtgcgg aagctggact tccccagtgc
                                                                300
ttcttttgat gtggtgctcg agaagggcac gctggatgcc ctgctggctg gggaacgaga
                                                                360
420
                                                                480
ccgcgtgctt gtccctggag gccggtttat ctcaatgact tctgctgccc cccactttcg
                                                                540
gaccagacac tatgcccaag cctattatgg ctggtccctg aggcatgcta cctatggcag
                                                                600
cggtttccac ttccatctct acctcatgca caagggcggg aagctcagtg tggcccagct
                                                                660
ggctctgggg gcccaaatcc tctcaccccc cagaactccc acctcacctt gcttccttca
ggactcagat catgaggact teettagtge cattcagete tgaggecaga geatggteet
                                                                720
                                                                780
ccaccettee tgecattetg ccetgggete cteaggtagt tggaatteet gaettaggae
                                                                840
ttggggttgg gtccaaggtg cttacatccc aggggcctca tgcctaagat agagggtggg
900
                                                                905
aaaaa
<210> 1157
<211> 1888
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (37)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1475)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1477)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1879)
<223> n equals a,t,g, or c
<400> 1157
gggggggaaa tttgagggcc.cccggcccgt ttagganaaa ttttggggga gttttggaat
                                                                 60
120
                                                                180
ggctggaact actggacaga cccttttgag atgtgcctgt ggtgctgtgg agatgtgtgt
                                                                240
agtggtctta gctctttgtt gagcttgtgt gtgtgttgtg tagtcttagc tgtatgctga
aattgggcgt gtgttggagg gcttcttagc tctttggtga gattgtattt ctatgtgttt
                                                                300
gtatcagctg aatgttgctg gaaataaaac cttggtttgt caaggctcyt ttttgtggga
                                                                360
agtaagtagg ggaaaaggtc tttgagggtt cctaggctcc tttgtacaac aggaaaatgc
                                                                420
ctcaaagcct tgcttcccag caacctgggg ctggttccca gtgcctggtc ctgcccttc
                                                                480
ctggttctta tctcaaggca gagcttctga atttcaggcc ttcattccag agccctcttg
                                                                540
tggccaggcc ttcctttgct ggaggaaggt acacagggtg aagctgatgc tgtacttggg
                                                                600
ggatctcctt ggcctgttcc accaagtgag agaaggtact tactcttgta cctcctgttc
                                                                660
```

| agggagtgg | attaacacac | ctccctacag | ctgtaggaac | tactgtccca | gagetgagge | 720 |
|-------------|------------|------------|------------|------------|------------|------|
| agccaggtgt | ctcacctgat | ttagagaaca | agtgctttag | tagtagttta | aagtagtaac | 780 |
| taataatata | tttagtggg | tagaattaa | aagaaatttg | aagaccagat | cataggtagt | 840 |
| ctacatata | atgaacagg | atgageegg | cagcctggct | atcattactt | tetteetee | 900 |
| catttagacc | cttctctccc | cttacatttt | tgtttctcca | tctaccacca | tccaccagtc | 960 |
| tatttattaa | cttaccaaca | ggagagtaa | agggccctct | tagettgatt | ttacttcttt | 1020 |
| ctttctctca | aggatatact | aagtgggact | ttgccctatc | ctatttqqaa | atccctaaca | 1080 |
| gaattgagtt | ttctattaac | datccaaaaa | gaaaaacaaa | atactaataa | agccatcagt | 1140 |
| gaaccgagcc | atoccaataa | acaataaatt | ttccagaaga | aatgaaatcc | aactagacaa | 1200 |
| atasagtags | acyccaacaa | taattaaatt | argatgagtt | tattatttt | tattttattt | 1260 |
| tattttattt | ttttaaagaa | agaateteac | tctgtcacyc | aggetgaagt | gcagtggtat | 1320 |
| | | | gggttcaagc | | | 1380 |
| gattettggtt | aggettagga | atacatacca | ccatgcctgg | ctaatttttg | tatttttaat | 1440 |
| agagagaga | tttcaccata | kaatcaaact | ggtcnanaac | tccvgaccvc | vtgatccgcc | 1500 |
| | | | agatgtgagc | | | 1560 |
| tgecytggec | assatstatt | tcacttctct | gtcatggttg | daadacadad | taggaaggat | 1620 |
| | | | ttcatggctc | | | 1680 |
| | | | tatgagtcag | | | 1740 |
| tagttgtgta | acttacaata | gaccttttga | actggaaaac | accttatcta | cattcacttt | 1800 |
| | | | gtttattttc | | | 1860 |
| | cgggggggnc | | geceaecee | acactgaaaa | aaaaaaaaa | 1888 |
| lilaaaaaci | cggggggnc | ceggeace | | | | 2000 |
| <210> 1158 | | | | | | |
| <211> 1899 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1158 | | | | | | |
| ccacgcgtcc | ggaagccggc | cactgcctct | gctctgctcc | tgctcctgct | gggcctggcc | 60 |
| | | | gacgcgtcat | | | 120 |
| agagccgatc | agaactacaa | ttacaaccag | catgcgtatc | ccactgccta | tggtgggaag | 180 |
| tactcagtca | agacccctgc | aaagggggga | gtctcacctt | cttcctcggt | gagtatgggg | 240 |
| gcctgatctt | catctggctg | gagagagaag | gggcctgagg | ccagagggta | tggaagggac | 300 |
| | | | tctggcaggc | | | 360 |
| | | | gtgtcagagt | | | 420 |
| | | | gggccaggat | | | 480 |
| | | | tctgggtgcg | | | 540 |
| agaggggacc | tcatggtggg | gtgtggagaa | agacccataa | taaagtgatc | tagggctggg | 600 |
| | | | tttgggaggc | | | 660 |
| | | | tatagcaaga | | | 720 |
| | | | tccagcctgg | | | 780 |
| | | | aggtggtgca | | | 840 |
| | | | cttgggaggt | | | 900 |
| | | | cacagtgaga | | | 960 |
| acaaacaaat | gaaaaacctt | agccaggcat | ggtgacacat | gcctgtagtt | ctagctactt | 1020 |
| | | | ccaggagttc | | | 1080 |
| tcacaccatt | ggacttcaag | tctgggcaac | agagggagac | cctgtctgga | aagaaagaga | 1140 |
| | | | | ~~~~~~~~ | 242224222 | 1200 |

tgacctagga ccctcggaaa gcaccttagg gtgggaccac ataggcacag ctctgagaag

atggtgttct agatggagca cagggaccgg gatagagatg ttacagggga actgtggaga

aaagagcctc ctggtggaag ggttcagagg tgggacgcag cgaggctgca tgggcgagag

gtgatagett ggeteggeag aaccaeaaae tetgttttag geggageaaa agtgagggge

accacaggcg aacaggtagg acagcaaaag aatggtgggt gcccagacgc tgggtgaaaa

gatgccccgt ttccgcaggc ttaggagtgg ccacgtgcta ccatttgatt ttctttcttc

taggcaattt cttgcaacca ccaccgaggc cccgaaaagc actggtcgtc agggagctcc

teceettgge ecceageetg tgeeageeet ggeeeggetg ceaeacetet gttteetagg

ctggggaccc agcttgtctc tccttgtttc ttcccactgc actgtggtgc ttcagtggcc accagcctcg tcacatacac cagcatcttt ctgtacctcc tccctttggt gacctgaagt

cactgtgaca gttctccagg aaggaggagc ttcctacttt tgagtttctc tgtggaaata

aaacatgaat cttgtttccc taaaaaaaaa aaaaaaaaa

1200

1260

1320

1380

1440

1500

1560

1620

1680

1740

1800 1860

1899

```
<210> 1159
<211> 1987
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (435)
<223> n equals a,t,g, or c
<400> 1159
                                                                     60
aaatatttcc aatataattt gaatggctaa ttttcagttg ctaattaatt agcagctttg
                                                                    120
taatacttga tttgggagca tttacttgga aatcctaagg actataataa aagttttcaa
catatttcta aattgtgtga gtttccagct gtagcttttg tctttgtcac attttaaaaa
                                                                    180
ataataagca agacacattg gggacactgg cagcagttgc caggttttag ctgccaccgc
                                                                     240
                                                                     300
ttcagtatga gatatagctg tcccatcttc ccccattcag ggtaggagat atagtgaccc
                                                                     360
agacttcatg caaatggaaa aaaagtttta actgaaatat ttatttagat ttcagggtct
                                                                     420
agatggatgg gaaagtagaa aaacatatgc aaatctcagt gttctcacta tgaccactct
gagcagagat ttggnttttg tttccttttg taacaaagtg aaaacaggtg agacaatgtg
                                                                     480
                                                                     540
cccaaaacaa agggaagaag agaaccttct gtgactccta aaatgttcca tgctgcattt
                                                                     600
ttgtttcatt ttttatttt ccttgctttg tttttaaaca tgaatataat gcttacttca
                                                                     660
aattgtttag taaaacaaaa taactaaaga aatgtgagct tcccaaggtt tctaaactat
                                                                     720
cgctgttgta tattctatag cgttccttat tctttgaggg aaactgtgct tgctgtgatc
                                                                     780
cattttgtct ctagcttcta gttgtgattc ttgtccataa gcaccaaatt tgatgcccat
                                                                     840
gatttcaaaa ggtcattctt ttatctgaat gaaaatggtg gtactaagac tgtgaaaatt
atgtgaaacc taaagtagtt gccaaagtgg ctcagggttg taaaattcat tgacttaatt
                                                                     900
                                                                    960
attcatgtgc cagatcaacc cctttatttt ctctttagct gtgcatattt aaaatattgg
                                                                    1020
aaagtatcag atttacagat tttctttgac taattttttt cacataactt taggattttc
                                                                    1080
qaaaqttgta accataactg gatatcttag ctgagcaaag gcggttataa tttgtctttt
                                                                    1140
taagatcact ggaaattgat aaaattttgt gataattatg attattctgt gccatttaca
                                                                    1200
gtttctaata ctatactgta tgaaatatgt ataaatatat gatgctgagt ctgtggaatg
atacttctga aatcaaaatt cctcataagg catgaagttg taaaaacttg aatgtgtata
                                                                    1260
gttagatatt taaatggttg cttcttcata gaattgtctg ctttttaaaa ctggaagtac
                                                                    1320
aggattttct tcaggtaaaa tctgtgtgtt ccaattacag ttgtagctga aggaagtatg
                                                                    1380
                                                                    1440
ctttggtgag tcaattagta tgggaacttg actaaagacc cccagtgttg taacgtacct
                                                                    1500
ttgtacccag acaaaacaat tatgttacat tcctcaaagt ggcatgggct ttcttctcta
                                                                    1560
attcttytgt tttattagac ccaagacaag ttctaaaaat tgaatgcaat gagagattgt
                                                                    1620
ccagaaatgt aatatatact aaaatatacc acttaagcat tgattgcctt ttcttgtttg
cttcaagaat ataaaacttg ttacttgagc ttggaatcat gggcttgatt gaattaatta
                                                                    1680
ctcttgggga aaaaagacac cttgtggcat taagtcttgc tttggttaaa gccttatttc
                                                                    1740
acataattgc taaaaactca tttttgttta atatactacc tatagtttaa ttatcggcac
                                                                    1800
ttgtattttg taacttgata tcttacctag gattgggaat ttgggacatg acacgtacta
                                                                    1860
taaaagtcag tctatgtaca tactgcttat tgatgtgctg tgatatgagg gaatctgaaa
                                                                    1920
1980
                                                                    1987
aaaaaat
<210> 1160
<211> 906
<212> DNA
<213> Homo sapiens
<400> 1160
                                                                      60
ccacgcgtcc gaatggaggc gactacggct ggtgtgggcc ggctagagga agaggcgttg
                                                                     120
cggcgaaagg aacggctgaa ggccctacgg gagaaaaccg ggcgcaagga caaggaagat
                                                                     180
ggggagccaa agaccaagca tctcagagaa gaggaggaag aaggcgagaa gcacagggaa
                                                                     240
cttaggctgc ggaactatgt cccggaggat gaggacctga agaagaggag ggtgcccag
                                                                     300
gccaaaccgg ttgcagtgga ggagaaggtg aaggagcagc tggaggccgc caagcccgag
                                                                     360
cccgtcatcg aggaggtgga cctggccaac ctcgctcctc ggaagcctga ctgggacctc
                                                                     420
aagagagatg tggccaagaa gctggagaaa ctaaaaaagc ggactcagag ggccattgcc
                                                                     480
gagetgatee gtgaaagget gaaaggeeag gaagacagee tageetetge agtggatget
                                                                     540
gccaccgaac aaaagacctg tgactccgac tgaggcatgc cctgccccac cactcgccca
```

```
tcaggcctgt cctgcagggg atggtcttgg gcagggatgg gggctaggct tgccatcacc
                                                                     600
tccagtttgg cttctgagca gagactccct gcccatcaag tctgaaaccc ccatggatga
                                                                     660
ggtcagctcc ttgtctgctg ggtggcccct gccattctga atggaggcag aaccagcaac
                                                                     720
                                                                     780
aactctgggc gtgcctgtgt ctgcacatgt ggatgtacat atgtctgtat atatgtatat
                                                                     840
attttgaact ttctaaaaaa aaaatctgga aatagaaaca agtaaacccc tgaaaaaaaa
                                                                     900
906
aaaaaa
<210> 1161
<211> 4597
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (562)
<223> n equals a,t,g, or c
<400> 1161
                                                                      60
ggggcgcggc ggcagtcggc tctatgttcg cggtcttaac ctctcctctg gccgagtcct
tgcaagaagt gaattacccg accctgcaaa acacttacta ttttggagtt taaagtatgt
                                                                     120
                                                                     180
catcatggca aagtttcgga gaaggacttg catcattttg gcacttttta ttctatttat
                                                                     240
tttctctctg atgatgggtt taaaaatgct gagaccaaat acagctactt ttggagctcc
                                                                     300
ttttggactt gaccttcttc cagaacttca tcaacgaact attcatttgg ggaaaaattt
tgatttccaa aagagtgaca gaatcaacag tgaaacaaat accaagaatt taaaaagtgt
                                                                     360
tgaaatcact atgaaacctt ccaaagcctc tgaacttaac ttggatgaac taccacctct
                                                                     420
gaacaattat ctacatgtat tttattacag ttggtatgga aatccacaat ttgatggtaa
                                                                     480
atatacat tggaatcatc cagtgktaga gcattgggac cctagaatag ccaagaatta
                                                                     540
tccacaaggg agacacaacc cntccagatg acattggcty cagcttttat cctggaattg
                                                                     600
ggaagttaca gttctcggga tccttctgtc atagaaactc acatgagaca aatgcgctca
                                                                     660
gcttcaattg gtgtactagc cctctcttgg tacccacctg atgtaaatga tgaaaatgga
                                                                     720
gaacctactg ataacttggt acccactatt ttggataaag ctcataaata taacctaaag
                                                                     780
gttacttttc acatagaacc atatagcaat cgagatgatc aaaacatgta caaaaatgtc
                                                                     840
aagtatatta tagacaaata tggaaatcat ccggcctttt acaggtacaa gacgaagact
                                                                     900
ggcaatgctc ttcctatgtt ttatgtctat gattcctata ttaccaagcc tgaaaaatgg
                                                                     960
gccaatctgt taaccacctc agggtctcgg agtattcgca attctcctta tgatggactg
                                                                    1020
tttattgccc ttctggtaga agaaaaacat aagtatgata ttcttcaaag tggttttgat
                                                                    1080
                                                                    1140
ggaatttaca catattttgc cacaaatggc tttacttatg gctcatcaca tcagaattgg
gctagcctaa aattattttg tgataaatac aacttaatat ttatcccaag tgtgggccca
                                                                    1200
                                                                    1260
ggatacatag ataccagcat ccgtccatgg aacacgcaaa acactcggaa ccgaatcaat
                                                                    1320
gggaagtatt atgaaattgg tctgagtgcc gcacttcaga cacgccccag cttaatttct
atcacctctt ttaatgagtg gcatgaagga actcagattg aaaaagctgt tcccaaaaga
                                                                    1380
                                                                    1440
accagtaata cagtgtacct agattaccgt cctcataaac caggtcttta cctagaactg
                                                                    1500
actcgcaagt ggtctgaaaa atacagtaag gaaagagcaa cttatgcatt agatcgccag
ctgcctgttt cttaatgcat tgattaaagt ttaatagtta tcaaaatcac ctaattttta
                                                                    1560
aaaatagctt tcgttttgag ttctggaaag aaaactgtca aaatcagtat atactattag
                                                                    1620
ttatatttaa aaatatttt ttaaattctt tacagataat attatacttg ttacccttca
                                                                    1680
caataccaca tgagaaaata tctgagacaa aatgtataca aatatattcc ttatggcata
                                                                    1740
                                                                    1800
atttattgca tttctgactg aaatcaaaat tctgatttga tggcaattga attttcattt
                                                                    1860
tacaatagat aaatgcttgt gytacctaaa gcacttagca cacagttaaa ttatatttac
                                                                    1920
atcctagacc caaataaata ggattgtgtg tatatttggg atatctattg aagaaaaaa
                                                                    1980
gaaaacccct taaarataat gtacatgctt catgtcatgt ctttaaaata atttaatcaa
                                                                    2040
ctttattgtc ttagtattta gactctggat aactctacaa taatgaggaa attcttaaga
                                                                    2100
ataacaaaat cactgtacct tcctctcaat tttgctgtga acctgaaatg gctttaaatt
                                                                    2160
aatactctta ttttttattt aatttaatta cataaattaa accttaccat gaccaaattg
                                                                    2220
tgttaggamg gcctgctatc tacagcacag tgtgtcattt gcagatttgt ggttacctat
                                                                    2280
accacgctag gtgttttgac atgtttagtg tttctgcttt acagtgctga attccatatt
                                                                    2340
ttaqaaqcta tgaaagtcct tttatgaaaa agttactgat tgcttctcag ttattaggaa
                                                                    2400
aacagttgtt tcacaattat tatgtagata tgatgcccaa atatcatttt tagtatatct
                                                                    2460
tgtcgatctt taagttgtta ctattgtgtt attcatgtct ttaaatcaga taccaaatat
tttttaggaa agaaaaatgt tattactgtc attaggttgt cttttaatac tttaagttat
                                                                    2520
```

<223> n equals a,t,g, or c

<223> n equals a,t,g, or c

<220>
<221> SITE
<222> (33)

```
tttgacgaaa agtaatagag aaaatttact tagcatttta gattctagag acatggaaat
                                                                     2580
gaaaattatt ttatgtctag agtaggtcct gaagtttggc tttacattaa gtttagcact
                                                                     2640
gtatcagaat gaagaaacta atattttaca taaaaactaa tactttcaat tttttatata
                                                                     2700
gtaatatccc cattttgtaa atgttagact tttatcatac ctgtaagtta aaatacttgt
                                                                     2760
                                                                     2820
tatcaataac ttgtcatatt gtgacaaatt gatcacttgt gtacgaaaaa taaatctcct
taaaaactaa ataaaatgca ctgtattctt acagttaatg tttataacta tagtaaaaaa
                                                                     2880
                                                                     2940
ttaatatata tcctattaca taaatgttat ttcttaggtg ttccattaag aagagcaata
gaataatgct aaaaaataat gcctataaat cttcagagta taaagacatc cattcagaaa
                                                                     3000
caaaaattag cactaaattt tttataaaat agaccagatg acaaaattta ttttatttt
                                                                     3060
aaacagtggt tttgacacaa attatgttat tgaaaagcat tattaatgtt taatttattt
                                                                     3120
aaaattttgg aatttgccat ttctcagaca atgatcaggc cttaggaaat taatacagta
                                                                     3180
gtagtaatca ttttctaggg gaaaataaaa gaatarrtca ctatactgat attttgatat
                                                                     3240
aagcaagcac ttacatggta atcactatat agatccaacc tgtggatttt cttcttatgt
                                                                     3300
ccatttaact agaatatatt attttaggta taatttacaa atgtcacacc taataatctt
                                                                     3360
ttataatata ccatatttca ttaaagtttt gttagagaag tatctaccac agaggagttt
                                                                     3420
ttgtcattgt gtacgttgtg tatttgaacc caccatgaca gaaagtaaat tttaggaaat
                                                                     3480
agttatgaga ttaagggaaa atctataaaa acaaggttag catattctca acacagatac
                                                                     3540
caccactttc tttttcccat tatagacatg gtgaatccac acagcatact tcatctctga
                                                                     3600
gctttrttgt gattcctcaa cacattaccc taaccagcca gcagtaacag atttcagagt
                                                                     3660
aagataaagc agattctgtc ttcattgcaa aaagttattc tcaatggaag aatggcatct
                                                                     3720
gatctcataa ttactagttt atattaatat agtttttttc tcccttttta ataaaataat
                                                                     3780
tacagtcatc cctcagtgtc tgtgggggat tggttccagt tacccctata gataccaaaa
                                                                      3840
tctgcagatg ctcaagtccc tgatataaac tggcatagta gttgcatata atctatgcac
                                                                      3900
atcctcctgt atacattaag tcatctctag attatttata acacttaata caatgtaaat
                                                                     3960
gctatgtagt tgttatacca tactggttag tgaataatta catgaaaaaa aagagtctgt
                                                                      4020
acatetteag agttteagte ggeaatttet tggeeatgga tgtagaacet acagataagg
                                                                      4080
tgagccaact gcattaggaa ataactctaa taattctgtt aattcttaga gaggaaaact
                                                                      4140
ttcaaaatct tcctcaggta tttattacaa ctgcctttac cattttagtt gtaacacagt
                                                                      4200
ttaaattgtt atgataacaa gtaaataaga gcaaagaatt tatttcttaa ttcaaaacta
                                                                      4260
                                                                      4320
tacgtttgaa ttcaatatgg tataacttaa agtggtataa tacatacaat gcatgaatca
taatggattc ttttataagt tattaatttt tatggtttaa tcagtctaat tgttttgact
                                                                      4380
gttatagaaa ccaaatattt tactgtttct tttaaggact aatattgtca aaaactgctg
                                                                      4440
                                                                      4500
 ttattaactt cacttgagtt gtttaacttc cttctgtttt aagattgtaa ttaaaaatta
ctattttgtt atatggaatg gttaattttt acctaataaa aacatagatg aaatacattg
                                                                      4560
                                                                      4597
 taaaaaaaaa aaaaaagcct ccctccgtgc cgtcgat
 <210> 1162
 <211> 558
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> SITE
 <222> (6)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (8)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (10)
```

| <400> 1162 | 60 |
|--|--------------|
| acttentnan ggggaettte aactggaaat teneceteae taatkggaac aaaagetgga getecaeege ggtggeggee getetagaac tagtggatee eeegggetge aggaattegg | 120 |
| cacgagete cataggaace cagtgactgg ggggtgacge cacgagete agetatttge | 180 |
| actotagtat gtagtttaac totacttttc ttccagatta gccctatagt cacagcctca | 240 |
| gggggccagg ctgggggaac ctcacctggc ccgtactcct gggggtttcc ctttgccatt | 300 |
| gggcccctg agggactgtg ggggctcaag ggtaatgcca gaggcccatg gcccagcga | 360 |
| ggggctgtgg ggcacctaga gttctcggtg tgtctccttc attcattggc ctctgctggg | 420 |
| getectate entettac etetetecat ceatetete etegteagaa eteggeeag | 480 |
| tgtgtgagtg agagcaggag tatttatgaa aataaaacgt cgtttttcct ggaaaaaaaa | 540 |
| aaaaaaaagg gcggccgc | 558 |
| | |
| <210> 1163 | |
| <211> 1442 | |
| <212> DNA | |
| <213> Homo sapiens | |
| | |
| <400> 1163 | 60 |
| ccagagactg cctcacaccc ctcaaccaga cggccatgac tgcccttttg tgaacacaat | 120 |
| gtgaaagaag cctgctgtgg tactgagcgt csggctgtca caaggcactg gaagaaggga | 180 |
| gcctgctggt ccagagtgtg cgtgtgtatc ggtgtgtgt tacacttgca tgtgtgtgt | 240 |
| tgatccagta ggatcctaga gacaacctgt catactgttt acaaaattgt gcagctggtt tcgtgctgac ccttagggtg cgtctgttgg gttttgttgg gctagaaaaa tgaaaatttt | 300 |
| cagatggcgt tttcattcct ctgactgata ttgagctgct ttggtgttaa aggtgtaatg | 360 |
| tgtacagagt tgtatttaac aataataaaa gtaacttaag tttgctctat cagattttag | 420 |
| ttctgcacag aggttaagtg ggaaaatgca gctgttgcaa aatgtatata aatagtatgt | 480 |
| tcatttttt cagtatatta tctgatactg tgttagcagc aggtctgctt aaacctagtc | 540 |
| ttgttgttat tgagtcattt cctctcttt gataactaga actgaaagca tttttaacat | 600 |
| tottotoctg gaagaaatga attacttgaa gcatgaaaag cacaccaggg tggttgttta | 660 |
| tttaggaatt atgactgtag atttaaaaac aagcaaagaa acaacacctc agcagctgcc | 720 |
| contractta gtctccactt cagaggggga tgcgaagagg tcggcccagc tccggtgacc | 780 |
| atgaaggtgg cacaggaatt acagtgtgaa tggctgtgtc agatgttttc glaccicaga | 840 |
| traaaaatat tootgaggto agacgocaca attitoatga cittoitoag aagtagoada | 900 |
| throatgae tteegetate etetgaaaaa caaagttatt tagaacatgt teatgeaaaa | 960 |
| grantictua ccaagtitaa atcgagettt tetaetgaea tgaaactgit ggaaactgat | 1020 1080 |
| ctcattttat aagaaatgat tttcccctca aggaggcgtc tgtaattcca gaacagtcca | 1140 |
| gacatcagct gtacctcatg ctcagtagtt tttatttgag tttcttttgt gagttaacta | 1200 |
| tgggagattt aacctctttt gccaaagagg gaagtgtgtg tgttttttta atagaaaata | 1260 |
| tggaccaaaa attititicc ctgaagaatg tattataacc ctattigtgt ggttattaca | 1320 |
| tcctgtgaaa tgtatatatg ttaaaataat gggggtgctg gaaggtcatg gcagactagc | 1380 |
| tgctggttag tgtggagggg aartggttta ctttgtagag tttacatggt tttatgcgca cactaattgt aataaactat gccaaaccaa aaaaaaaaaa | 1440 |
| | 1442 |
| CC | |
| <210> 1164 | |
| <211> 1228 | |
| <212> DNA | |
| <213> Homo sapiens | |
| | |
| <400> 1164 | 60 |
| cccacgcgtc cgggaggtga agagcatgcc ttcctgactg taggatcaaa ggaagccaat | 60 120 |
| aatgggcctc catttaactt tcctggtaat tttggtggat caaatgcctt tgggccacca | 180 |
| atcottctc caggattagg aggcggggcc tttggtgatg ctaggcctgg tatgccttca | 240 |
| gttggaaaca gtggtttgcc tggtctagga ctggatgttc cgggttttgg aggtggacca | 300 |
| aacaatttaa gtgggccatc gggatttgga gggggccctc agaattttgg aaatggccct | 360 |
| ggtagcttaa gcggtccccc ggggtttgga agtggccctc ctggtcttgg aagtgcccct gggcatttgg gtgggccacc agcttttggg cctggccccg gccccggccc cggccctggc | 420 |
| gggcatttgg gtgggccacc agettttggg tetggeceeg gedeeggede eggacegaca ccaatccata ttggtggtcc ccctggcttt gcatctagtt ctggaaaaacc aggaccgaca | 480 |
| gtaattaaag tgcaaaacat gccctttact gtgtctattg atgagatttt agatttcttt | 540 |
| tatggctatc aagtaatccc aggctcagtg tgtttaaaat acaatgaaaa aggtatgccc | 600 |
| acaggtgaag ccatggtggc ctttgagtct cgggatgaag ccacagctgc tgtcattgac | 660 |
| | |

<212> DNA

<213> Homo sapiens

| ttaaatgaca (| aacctataaa | ttcaacaaaa | gtaaaacttg | tattagggta | gccattcaca | 720 |
|--------------|------------|-------------|------------|--------------|------------|------|
| tcatttttta | taggetagg | cttcatatta | ctataattaa | tgcatccaga | ttattttcct | 780 |
| agtatttcca | cayyycayac | tataaattat | ttcaattcca | tatagettgg | tttccataac | 840 |
| atagagcatt | ggttagaact | ttagagagaga | ctcactcacc | aggataaaca | ttactatata | 900 |
| ttacagtaaa | ggttgattgt | gagagaga | aaatgatttt | aggatacat | tagagaaacc | 960 |
| atttgtaaaa | getatetgga | gagaacacac | ttatcaacca | atctagatta | atttattt | 1020 |
| atttgtaaaa | Cicaaaigac | cacacaaage | taaataaaa | tcattgaggg | tactettace | 1080 |
| ataccatatg | ggatgaagaa | aacayaaacy | agaatttaat | ttaaaactaa | acadatttdc | 1140 |
| agctgctgaa | aatagaagtt | ggetaetete | agaacttygt | ttttaaagttgg | gaataaaatt | 1200 |
| tttgttatag | | | CCCCacccc | ttttaaaatt | gaacaaaacc | 1228 |
| tctgtataca | aaaaaaaaa | aaaaaaa | | | | 1220 |
| | | • | | | | |
| <210> 1165 | | | | | | |
| <211> 2241 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1165 | | | | aatataaaaa | aactaccaac | 60 |
| ccacgcgtcc | geggaegetg | gacggagetg | eggeggetat | getgtggage | ggctgccggc | 120 |
| gtttcggggc | gcgcctcggc | tgcctgcccg | geggteteeg | ggteetegte | cagaaccggc | 180 |
| caccggagct | tgacctcctg | catcgaccct | tccatgggac | ttaatgaaga | gcayaaayaa | 240 |
| tttcaaaaag | tggcctttga | ctttgctgcc | cgagagatgg | ctccaaatat | ggcagagrgg | 300 |
| gaccagaagg | agctgttccc | agtggatgtg | atgcggaagg | cagcccagct | aggettegga | 360 |
| ggggtctaca | tacaaacaga | tgtgggcggg | tetgggetgt | cacgtcttga | tacctctgtc | 420 |
| atttttgaag | ccttggctac | aggctgcacc | agcaccacag | cctatataag | catccacaac | |
| atgtgtgcct | ggatgattga | tagcttcgga | aatgaggaac | agaggcacaa | attttgccca | 480 |
| ccgctctgta | ccatggagaa | gtttgcttcc | tactgcctca | ctgaaccagg | aagtgggagt | 540 |
| gatgctgcct | ctcttctgac | ctccgctaag | aaacagggag | atcattacat | cctcaatggc | 600 |
| tccaaggcct | tcatcagtgg | tgctggtgag | tcagacatct | atgtggtcat | gtgccgaaca | 660 |
| ggaggaccag | gccccaaggg | catctcatgc | atagttgttg | agaaggggac | ccctggcctc | 720 |
| agctttggca | agaaggagaa | aaaggtgggg | tggaactccc | agccaacacg | agctgtgatc | 780 |
| ttcgaagact | gtgctgtccc | tgtggccaac | agaattggga | gcgaggggca | gggcttcctc | 840 |
| attqccgtga | gaggactgaa | cggagggagg | atcaatattg | cttcctgctc | cctgggggct | 900 |
| gcccacgcct | ctgtcatcct | cacccgagac | cacctcaatg | tccggaagca | gtttggagag | 960 |
| cctctggcca | gtaaccagta | cttgcaattc | acactggctg | atatggcaac | aaggctggtg | 1020 |
| gccgcgcggc | tgatggtccg | caatgcagca | gtggctctgc | aggaggagag | gaaggatgca | 1080 |
| gtggccttgt | gctccatggc | caagctcttt | gctacagatg | aatgctttgc | catctgcaac | 1140 |
| caggccttgc | agatgcacgg | gggctacggc | tacctgaagg | attacgctgt | tcagcagtac | 1200 |
| gtgcgggact | ccagggtcca | ccagattcta | gaaggtagca | atgaagtgat | gaggatactg | 1260 |
| atctctagaa | gcctgcttca | ggagtagaac | ccacacttgt | tctggcctgg | tgttcagtgc | 1320 |
| gactgcagtc | agtgttgagt | ggtgccatgt | gggccgctct | attccaaagg | aatcatggat | 1380 |
| tagacccaag | ggctgagctc | ctctagggca | ggacctgcac | cctgtgtgtt | ggcaccagca | 1440 |
| tcaaatctta | gactggggca | gaatccccag | tggaaccgga | agagctggac | tgatgagaaa | 1500 |
| catcagaaga | acacatacta | ccttgttttc | ctaatgccag | aagggtgacc | agtgaagatt | 1560 |
| caccatcaaa | ccatgaaagt | cctttcctgg | atccacttta | tcttgattag | tctgcatttt | 1620 |
| actagttcac | tggatccctc | ctctaggggc | ctggggactt | tcactgatgc | tcttcctgat | 1680 |
| tctagagcaa | aggtgtggga | aggggaaatg | gaggaatgcc | ctcctgtctg | tgtcgttctc | 1740 |
| tataccacaa | ctacagatgc | agaaggtttc | tctggatagc | acacctctga | atgtaaatca | 1800 |
| tgataaaatg | gatatttgga | aacttactcc | taagctgtga | tttagggtgt | atttctactt | 1860 |
| ctggactgcc | tcaatatcaa | gggctgagac | ttttgaattt | tgaatattcg | ttgggtttca | 1920 |
| tattaagaag | cctataatct | aggagtgcta | ttcagtgttt | cttttcctga | taaacacttt | 1980 |
| gaatatttt | tttaaatttt | tgtttccttt | tctgaagctg | ttcccccttt | taaatatttt | 2040 |
| taatcccatt | gataaaatct | atcetteace | ccctttggtt | ctactatagt | tgattttaat | 2100 |
| tttaaatgtt | taattotatt | tgattaaaca | cttaactgga | ttttggaata | ataaaactct | 2160 |
| catccaattt | ggcttttaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaaa | aaaaaaaaa | 2220 |
| - | aaaaaaaaaa | | | | | 2241 |
| | | - | | | | |
| <210> 1166 | | | | | | |
| <211> 1577 | | | • | | | |
| 1010: DNA | | | | | | |

| <400> 1166 | | | | | | |
|-------------------------|------------|------------|------------|------------|------------|--------------|
| ccacgcgtcc | gcccaaggac | gacgcagcca | tcgttggggc | cgtgcggctc | ctgtccgtgc | 60 |
| tgatcgccgc | cctcaccatq | gacctcgcag | gccgcaaggt | gctgctcttc | gtctcagcgg | 120 |
| ccatcatgtt | tgctgccaac | ctgactctgg | ggctgtacat | ccactttggc | cccaggcctc | 180 |
| tgagccccaa | cagcactgcg | ggcctggaaa | gcgagtcctg | gggggacttg | gcgcagcccc | 240 |
| tggcagcacc | cgctggctac | ctcaccctgg | tgcccctgct | ggccaccatg | ctcttcatca | 300 |
| tgggctacgc | cgtgggctgg | ggtcccatca | cctggctgct | catgtctgag | gtcctgcccc | 360 |
| tgcgtgcccg | tggcgtggcc | tcagggctct | gcgtgctggc | cagctggctc | accgccttcg | 420 |
| tcctcaccaa | gtccttcctg | ccagtggtga | gcaccttcgg | cctccaggtg | cctttcttct | 480 |
| tcttcgcggc | catctgcttg | gtgagcctgg | tgttcacagg | ctgctgtgtg | cccgagacca | 540 |
| agggacggtc | cctggagcag | atcgagtcct | tcttccgcac | ggggagaagg | tccttcttgc | 600 |
| gctaggtcaa | ggtccccgcc | tggagggggc | caaaccccca | gtggctgggc | ctctgtgttg | 660 |
| gctacaaacc | tgcaccctgg | gaccaagagg | cagcagtcat | ccctgccacc | agccagagca | 720 |
| caggaagagc | agtgtgatgg | ggcctcagca | gcgggtgccc | ctggctcggg | acaggtagca | 780 |
| ctgctgtcca | gccacagccc | cagcccaggc | agcccacagt | gctgcacgta | gccatgggcc | 840 |
| gcaggagtgc | atacaaccct | gcatccaggg | acacggccct | gctgggtgac | ctcaggccta | 900 |
| gtccctttcc | cttgcgtgaa | ggacacgccc | cacagaaggc | tacggggagg | actgagagga | 960 |
| cagggctgga | ggcagccaag | taacgtagtc | atatcatcgc | gctctgatct | ggtggcatct | 1020 |
| ggctgtgcaa | ggaagacccg | gctttgccct | cacaagtctt | atgggcacca | cagggaacat | 1080 |
| cctggactta | aaaagccagg | gcaggccggg | cacagtggct | cacgcctgta | atcccagcac | 1140 1200 |
| tttgggaggc | caaagcaggt | ggattaccca | aggccaggag | ttcaagacca | gcctggccaa | |
| catggtgaaa | ccccgtctct | actaaaaaat | acaaaaaagc | tgggtgtggt | ggcacacacc | 1260 |
| cgtagttcca | gctacttggg | aggctgaggc | agcattgctt | gaacccggga | ggtggaggct | 1320 |
| gcaatgagct | gagatcatgc | cattgcactc | cagcctgggc | aacgagagtg | aaactccgtc | 1380 |
| cccaccccct | gccaaaaaaa | aaaaaaaaa | aagccagggc | aaaggacctg | gcgtggccac | 1440 |
| | | | | ctatctgcaa | | 1500 |
| cccttttgta | aaaataaagg | aactggacct | gtaaaaaaaa | aaaaaaaaa | aaaaaaaaa | 1560 |
| aaaaaaaaa | aaaaaaa | | | | | 1577 |
| <210> 1167 | | | | | | |
| <211> 2110 | | | | | | |
| <211> 2110 <212> DNA | | | | | | |
| <213> Homo | caniens | | | | | |
| \Z13> 1101110 | Suprems | | | | | |
| <400> 1167 | | | | | | |
| ggcagaacta | agatttttga | ctctaaagag | agaaaattac | aagggtgttg | ccttatagca | 60 |
| aacccttggg | acaatccttc | atgtgagcaa | agtgttgatc | ttaatattgg | ttgtctgtgg | 120 |
| tgtgcttttt | tgtactgtaa | aaatatgtgg | ttcatgtcta | actctgctgt | tttattgtgg | 180 |
| ttgtggttca | agtttttaat | gtttaaagtt | gatgctgttt | tcagaagagc | tttttactaa | 240 |
| tttatttgtc | agtgttccct | atttgttact | taaccatgat | cctccagatt | ttttggagta | 300 |
| ttcttttcta | accttaaccc | tgccaaacct | tgatccattt | tgacatttgt | tatgcactat | 360 |
| ttttatatct | ctgtgagaga | tttttccaac | agtcagctat | tttatggcac | acttttttg | 420 |
| actgatgaca | tctcctttgc | tatacctcaa | tttttggaat | ttagagaaga | aatcagtagt | 480 |
| tttgcaatgt | taattattta | gatatttaat | ttcgcagatt | tttaaacttt | attttcataa | 540 |
| tttctgctta | atgtttaaaa | ttgaagagcc | ttttcatgta | ttaaataatg | aacacaaatt | 600 |
| atataattaa | aataattgga | gatgttgaaa | atcattttcc | cttcttaaac | agaaataaat | 660 |
| atttggaatg | aaggggaatg | tactagaaca | ccctttttgc | cacgggtaaa | aataacagaa | 720 |
| atgtatggtt | tgttttacct | tcatttctgt | acaagtaaag | cttattagtc | taatgttttg | 780 |
| ttcctttccc | acctcacccc | tacctctttt | gttttgtttt | gtttttgccc | tttatgtact | 840 |
| acattcttat | tttctaactt | ttaaacactg | tattggaggt | tttttttaa | tttacagatc | 900 |
| atatttattt | tactatttt | gtagaaaatt | attaattttg | attgtattt | tgtattttaa | 960 |
| aagcttcttc | acttgtgttc | cctaaatatt | catattgctg | cccaaaakta | tgactgtgga | 1020 |
| ggaaaaaaaa | atactttaaa | aatccacact | ttttgttaag | aaggaaacat | ttagcattta | 1080 |
| tatatttgtg | tatggaaaac | acttgatatt | ttatccctgt | tgcatctggc | tgcacagagc | 1140 |
| ctctcctcaa | agatgctaca | aaacttgaat | ataacacatt | ttggaagget | gactaacctc | 1200 1260 |
| gattctgtgt | tgtgatgtgc | aatactgttt | ctaatgtttg | tataaaaaaa | aacagtgtaa | 1320 |
| acctttttaa | tgcaaattta | ttttttcat | tgcatattt | gcagatttta | taaataaaa | 1320 |
| cattttttac | tgtcagaaaa | gatacccctt | ttgtcattgc | aactattttt | taaatccaga | 1380 |
| aatctttgta | ctgatgtaaa | tgattgtagt | cattttggat | agtgttttgc | taacaaaagg | 1500 |
| agagactttt | ttcatgcata | tttctatttk | gttttttgg | gwillatitt | attttaatag | 1560 |
| tagtaaaata | cttggaataa | cttttcatat | contgecate | aatattätt | tgtatttta | 1200 |
| | | | | | | |

```
tgtggaaata tataatttta tgacactaat tgctaaagtt tattttatgt tgaattattt
                                                                  1620
ttggagctga aatctttgta atattaaagc aactagtttc taattcccag tttctgtata
                                                                  1680
gaatcgcaca agtggtttat ggagtgtttg gattgtaatt ataaatggtt ctttgatatg
                                                                  1740
                                                                  1800
caaattaata ttttcagttg attttatttt atattcctaa tggggtgtta aagccgtttt
                                                                  1860
ttattttttt ctaaataaaa agagaaccca tgcttttatg gacactaggt aaacaccttc
                                                                  1920
agcttaaatt tttcgttaaa tattttagtt tattttattg ttatcttcca ggtgtctaaa
                                                                  1980
tctccagtct gtctgttgta ctggtaattt aactctgtaa tggaatagtt tgctgccaac
                                                                  2040
tatttatatt aagtaatttt taaatatttg taatattgtt gactgactaa taaactatta
2100
                                                                  2110
gggcggccgc
<210> 1168
<211> 1825
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (270)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (814)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1816)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1825)
<223> n equals a,t,g, or c
<400> 1168
ggccgcgcgg ccccgagccc cccgagccgg gcggggcgct caacaattyg gyaastctca
                                                                    60
120
tagtgaaaaa taaaactgcg gctacaacta ctgctttgca atttacatac ccactgttta
                                                                   180
ctacaaatgc ttgctctact agtggaaatt ctaatctttc acagacacag agttctagta
                                                                   240
actcatgttc tgtacttgaa gctgccaagn accaggatat tggattgcct agagcatttt
                                                                   300
ctttctgtta tcagcaagaa attgaatcca ctaaacagac gttaggtagt agaaacaaag
                                                                   360
ttttgcctga gcaagtttgg attaaagtgg gagcagcgct atgcaaacaa gcactgaaga
                                                                   420
ggaatcggag tagaatgcgt cagttggaca caaatgtaga gcgaagagcc cttggagaga
                                                                   480
ttcagaatgt gggcgaaggt gccaccgcca cacaaggcgc ttggcagtcc tcggagtcct
                                                                   540
cacaggcaaa cctgggggag caggcccaga gtgggcccca gggaggaagg tctcarcgta
                                                                   600
gggagaggca taaccgaatg gaaagagata gaaggcgcag aatccgcatt tgctgtgatg
                                                                   660
                                                                   720
agttgaatct cttagtgccg ttctgcaatg ccgagactga caaggccaca actctgcagt
ggaccacagc attcctgaaa tacatccagg aaagacatgg agattctctt aaaaaggaat
                                                                   780
                                                                   840
ttgagagcgt attttgcggt aaaactggcc gaangctaaa gctgaccaga ccggactcct
                                                                   900
tggtgacctg tcctgcacag gggagtttac agagcagccc ctcgatggag atcaagtgat
                                                                   960
cggactgaac aggaatcctc ggggggtgaa cagccattcc ttcgtgacct gtgcaacgcc
ttctgcaacc ctggagctct gctcggctag tctgactcga aaagggcgtg actcaagctg
                                                                  1020
                                                                  1080
acgggactcc agtagggact ttgagagcac attttgtaaa aatatttatc tagacgcaaa
tgcttatcca tgaatgtcct cttagaccat ttggggatga agccatctta ataattagta
                                                                  1140
ataattaatt agtaataatt agtaagcatt ttctcaatgc tctgattcca tcatgttttc
                                                                  1200
                                                                  1260
ttaacatgat aacttaaaaa attgacatcc tttgtacttt ctttaatctt aaaaagtaca
                                                                  1320
cggcttttta cttatttacc ttttaaawwt gcccctttag caattggaac aagttaaatt
                                                                   1380
gttaactaaa aacagtttgg aaattttatt tcattcgtta tatcacaccc ccttgtcatg
                                                                   1440
actctgagtc acgtgctgct gtattgcaac gtgcaggacc attttaaacc tgtgtgctaa
```

| aaattttcca | gatacttgct | ttaaagctac | ttttgtccac | aaatgaaata | ctgtcacagt | 1500 |
|--------------------------|--------------------------|------------|--------------|--------------------------|--------------------------|--------------|
| agacgcttaa | atgccacgtt | ttcataccaa | gagtcattca | ttacttcatg | tgtcacaaac | 1560 |
| tgtggtgttt | ggaattgggt | ttttcaatga | gtggctttac | ttatcacaac | aggtaatagc | 1620 |
| aatagaygtt | agtgcaatac | aaagtcaccc | tcaataaata | ctgttaattg | ggagatgtga | 1680 |
| gtttgtacac | aaaacatcag | actagacctt | tgtatgggag | agaatttact | gtacattaaa | 1740 1800 |
| | | | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | 1825 |
| aaaaaaaaa | aaaaangggc | ggccn | | | | 1023 |
| 010 1100 | | | | | | |
| <210> 1169 <211> 1349 | | | | | | |
| <211> 1349 <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| 12137 1101110 | 2012 | | | | | |
| <400> 1169 | | | | | | |
| ccacgcgtcc | ggtctcaggg | acgggctgca | gccatgtcct | attgccggca | ggaagggaag | 60 |
| gatcgaatca | tatttgtaac | caaagaagat | catgaaactc | caagcagtgc | agaattggtg | 120 |
| gctgatgacc | ccaacgatcc | atacgaggag | catggattga | tactgccaaa | tggaaacatt | 180 240 |
| aactggaact | gcccatgcct | tgggggaatg | gccagcggtc | cctgtggaga | acagittaag | 300 |
| tcagcctttt | cctgcttcca | ctatagcacg | gaggagatca | aggggtcaga | ccaacaccat | 360 |
| cagttccggg | ccatgcagga | argeargeag | adatacccay | acctctatcc aagcagaaga | aacagggggg | 420 |
| gaggatgagg | aagaggaaag | agagaagaag | ggatgaagt | aatgaaggcc | acaaggcact | 480 |
| attgaggeea | agtttagag | tagacattt | ggaccaagcc | ttgtcatcac | cttccaagaa | 540 |
| agtttccttc | tattatata | tocattataa | tatacaaaat | aacttattt | gatgatcaga | 600 |
| agtitteette | tcttgacctc | ttgacatata | cactgaaaaa | aatgggggtt | gtatgtatgt | 660 |
| gratectace | caaacctgtg | gccgccactt | ttgaattctc | agattgccct | gaattttgcc | 720 |
| acttttaaat | aatgtgctga | ataagctcag | caactaaaaa | ccattaccca | agaacgtttc | 780 |
| ttgtgagtga | gctgatttat | tctgattcat | tatattcctt | ttggtagatt | ttatacccct | 840 |
| tggggaaata | atacaacaaa | aacatctctt | aaaaatgctg | ggatggggcc | atatctacta | 900 |
| gcagaggcca | gatggtcaga | tatgatttct | gcaaacccat | cttgaccttg | agtatgtgaa | 960 |
| ggggtactgt | actttattcc | tgatacattt | tggtttccat | gtaggtgttg | agctcctggt | 1020 |
| tttctgtgtt | tggatgatga | agatttggac | ccttccattc | ataatccctt | tctaagtgaa | 1080 1140 |
| gggagaggct | ggcttggctg | ttccttgtta | ttccgaaagc | cctggtttgg | ggcccatgtt | 1200 |
| cacactggct | ctcagtctag | tcaggtgcaa | cgttcttgag | aggtggggac | accaaccatc | 1260 |
| ccagagtagc | agcaagagag | gaaacgttgt | gaattaagta | ttcaattaaa aaaaaaaaaa | aaaaaaaaaa | 1320 |
| | | | aaaaaaaaaaa | aaaaaaaaaa | addaddada | 1349 |
| adadadada | aaaaaaaaa | adddddagg | | | | |
| <210> 1170 | | | | | | |
| <211> 1273 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1170 | | | anataatata | gatgagtgtg | taaaaatcac | 60 |
| cttaatacct | tettaaatgt | ctatatatee | ttttattta | traattagtc | taaaaatcac tttcacagga | 120 |
| tggcaacact | gcatgaggtt | tatacttatc | tattgataat | cccctctccc | tccagaacac | 180 |
| ggaataatty | gaaaggggt | attcaactat | actaccaaat | caggaagatg | taaggtttac | 240 |
| aaattaata | agaatcatgg | ctctgtagcc | atttcaacca | gaataatttt | attgctaatc | 300 |
| tactttatat | gacagcattc | caggccagcc | agatgggact | gccttgtctg | gaggctttgt | 360 |
| tcatctcgaa | ggacacacac | ttccacactg | tttgtgagcc | ctcccacctc | cacaacttca | 420 |
| attataaatc | aagtgtgtgg | atctcaaagg | gtgcaattta | . tctttatata | ggaatacatt | 480 |
| tctagggctt | ccttcaagcc | cactctcttc | accctatttt | . ttcttatctt | aaattgagag | 540 |
| aaagagaatt | aatcttatac | tttgtcaaaa | cattttctac | : catatttcca | gatgacatct | 600 |
| gcgcttgaag | agtcaaagga | atctgtgtct | aatatcctgt | tttaactgc | tgtaggggca | 660 |
| ggatggaaag | gatgatgggg | gctgccacac | cactgattgg | ccttttcttt | cacgtgattc | 720 780 |
| atccttcctc | attgtggcaa | ggagtttctt | tetetttte | ttcctccttt | gggatcattg | 780 840 |
| tgtatgaaaa | gaaaaacttt | aaatgacaaa | ccagactcc | aggigeettg | caaaggttga cattggcatg | 900 |
| aggccagcca | ggattgctgc | tatagetget | . acteolycea | . acaccectic | ttctccctcc | 960 |
| acygaatgaa | ayyatycaty atcatcaact | ccttccctca | tttattttt | r ttaagttgtg | tgaattattt | 1020 |
| accaccccca | gicgicaget | | | , ,, | . 3 | |

```
1080
ttaacccatt tatcctgttt gtgcataggg tttttaagaa gaaacagcac agtgcaacga
gcaaatcttt ttggggtgtg tgggaagcaa gggagggagg acatggagaa aagttcttta
                                                                   1140
aacaaatagc aaactattga acatgtgtaa aatcctgtat catttatgaa atatgtataa
                                                                   1200
1260
                                                                   1273
aaagggcggc cgc
<210> 1171
<211> 1468
<212> DNA
<213> Homo sapiens
<400> 1171
                                                                     60
aattcccggg tcgacccacg cgtccgggga gagataccaa tatcatcaag ccagaccaac
                                                                    120
agaagtteet tegatttget eecaegggag tteegtetgg tggaagteea tgaeceaece
                                                                    180
ctgcaccaac cctcagccaa caagccgaag cccccacta tgctggacat cccctcagag
                                                                    240
ccatgtagtc tcaccatcca tacgattcag ttgattcagc acaaccgacg tcttcgcaac
                                                                    300
cttattgcca cagctcaggc ccagaatcag cagcagacag aaggtgtaaa aactgaagag
                                                                    360
agtgaacctc ttccctcgtg ccctgggtca cctcctctcc ctgatgacct cctgccttta
                                                                    420
gattqtaaqa atcccaatgc accattccag atccggcaca gtgacccaga gagtgacttt
                                                                    480
tatcqtqqqa aaqqqqaacc tgtgactgaa ctcagctggc actcctgtcg gcagctcctc
                                                                    540
taccaggcag tggccacaat cctggcccac gcgggctttg actgtgctaa tgagagtgtc
                                                                    600
ctggagaccc taactgatgt ggcacatgag tattgcctta agtttaccaa gttgctgcgt
                                                                    660
tttgctgtgg accgggaggc ccggctggga cagactcctt ttcccttgaa tgggaaggag
                                                                    720
cagggattcc atgaagtggg tattggcagt gtgctctccc tccagaagtt ctggcagcac
cgcatcaagg actatcacag ttacatgcta cagattagta agcaactctc tgaagaatat
                                                                    780
gaaaggattg tcaatcctga gaaggccaca gaggacgcta aacctgtgaa gatcaaggag
                                                                    840
gaacctgtga gcgacatcac ttttcctgtc agtgaggagc tggaggctga ccttgcttct
                                                                    900
ggagaccagt cactgcctat gggagtgctt ggggctcaga gcgaacgctt cccatctaac
                                                                    960
ctggaggttg aagcttcacc acaggcttca agtgcagagg taaatgcttc tcctctttgg
                                                                   1020
                                                                   1080
aatctggccc atgtgaaaat ggagcctcaa gaaagtgaag aaggcaatgt ctctgggcat
ggtgtgctgg gcagtgatgt cttcgaggag cctatttcag gcatgagtga agctgggatt
                                                                   1140
cctcagagcc ctgatgactc agatagcagc tatggttccc actccactga cagcctcatg
                                                                   1200
gggtcctccc ctgttttcaa ccagcgctgc aagaagagga tgaggaaaat ataaaaggaa
                                                                   1260
aagagggaga ttttttgtcc agacctacta gacccaacag aaaaggtttt tgtattagaa
                                                                   1320
tctgtttcct taaaaattga tttgactcct gttcttaaac acaagtggtt tttcctaatt
                                                                   1380
                                                                   1440
ccagaggaac tggacgtcac caaacaaggt tgcattttac ttttgcaaaa aaaaaaaaa
                                                                   1468
aaaaaaaaa aaaaaaaaaa agggcggc
<210> 1172
<211> 1176
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (639)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (700)
<223> n equals a,t,g, or c
<400> 1172
aattcggcac gaggtttctc tagaagtaat ttatgttatc aggttatccc ctgagttttt
                                                                     60
                                                                    120
tettacteae catatgtetg gtggttetea cagecagggg caetgagggg etetgeeetg
                                                                    180
ggatctggag gccagcactg ttcacctgat ctccaccact gagatacctc tggctagagc
                                                                    240
cataatcagg tggcccaaag gactgaacaa ggaagaatgg gagggcactc tagactaatt
aaggttgtct tttcagtcta aagttaacaa tgacacacat gaattttcat atcagtataa
                                                                    300
                                                                    360
ttagatgcgg gtcccatcta attacagtgg gtcattatgg ctgttcggtt agagcagctt
gggtgctctg tgaccatggc atgtgcccgt gtcaggacta gacaaagtca tttgcttggg
                                                                    420
```

| gaagctctct | aaaattaaaa | tatasaaccs | adadcaccta | atataaatcc | tatacataaa | 480 |
|------------|------------|-------------|------------|------------|------------|------|
| gttctgtcct | ccccccagg | cgtgaggcca | ctactacaca | caddtacaca | acaactatca | 540 |
| caggcgcttc | atattaaaa | atagaacac | atatattata | cttttttaaa | gagtatatag | 600 |
| caggegette | ternataga | atgaggeetee | cacactttnc | accasattot | acctacctat | 660 |
| rgatagetta | tgraatecaa | toggaggag | cagagttene | agtataacce | atctttcaca | 720 |
| ttgccaactt | aacctcacca | tagaaagcca | aaagattcan | ttttaggeea | atatttaaca | 780 |
| ttacagagtt | taaagtactt | tttttaaatt | yctattttat | ttttaacaaa | atatttaata | |
| aaatatagta | tatctcatgt | gccaggtact | atttgtaata | tttataaaca | ctgatttayt | 840 |
| taatcttcac | agagactcat | tttacagatt | ggaaaacaga | ggcagagaga | agttaagtaa | 900 |
| ctttaatgtc | actcagctgg | gtagtatcaa | agtcttggct | gctggctcca | gagtctagac | 960 |
| ctttaaccac | tgtgttatgc | tttccatggg | taaagcaacc | taaaaaggcc | cctggaatca | 1020 |
| gttacatgtg | gttggagact | aactctgtca | ttgacttact | aaatgcttga | tattgggcaa | 1080 |
| tttatctaac | ctctctctgc | atttagtaag | tcaatgacag | agttagtctc | caaccactgt | 1140 |
| | | agcaacctaa | | | | 1176 |
| 5 - | | | | | | |
| <210> 1173 | | | | | | |
| <211> 1779 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | saniens | | | | | |
| \ZIJ> HOMO | Sapremo | | | | | |
| <400> 1173 | | | | | | |
| cetcaetcae | atatttaata | ccatggtgta | agctgatagc | acaagttctg | gcgacaggta | 60 |
| ccccagcgag | acacceggea | tgcaagcaca | cactatacas | actagtacca | ataatgctgc | 120 |
| geacgtatet | gagagacacc | ctttcctctc | ttetegettt | aaatgattgt | taggaagtta | 180 |
| tgttcctgct | getgeteetg | ettteetete | ctetegettt | adatgattgt | tagtaagtaa | 240 |
| gattttcctg | gagettegga | agaaatgaaa | atggaaacat | gatgaagata | ataaartaca | 300 |
| atcaatgaga | aaaataatga | acatatgaat | accacctaaa | aatacactya | ataaaytata | 360 |
| ccatatagca | ttatttttat | aggaaatatt | tcatgtccct | taaatatett | gitagitata | 420 |
| gggatggaca | gtttatgtta | agcacttagc | ttaaacaatc | cgtttatatt | agcactgtat | |
| cccttgtgcc | atccaacatt | ttgtatgttt | ttgtaaacag | ttcatataca | gtacatttct | 480 |
| gtactgcttt | ctttaatgta | tacatgcctt | gtttaacttg | gaatctatta | ttattaatca | 540 |
| attgactatt | aaatctggtt | aaatagttca | cctggattaa | cagtattgtt | ggacagtcct | 600 |
| aaaaatggcc | agattgtgga | acagctgttg | aatgtaatac | ttccaaaatg | tacatatctt | 660 |
| tccccacgtc | tgtttcactg | gttcgttcat | ttgtttgttt | cttaaagtca | ggtgctctgt | 720 |
| cagactaacc | tagagagctg | ttatggtaga | gaaagttatc | atatgtgtgt | ggcatgaaat | 780 |
| caagaataca | cctatgaagt | tagtccatat | actttgcaac | tccttagagt | acttttttcc | 840 |
| ttaattaagg | aagtagtcct | tgcacttcta | atcttacata | gcatccatac | ttagaatttg | 900 |
| gcatatcatc | taggatttta | ccaatatacg | tcaaagccct | ttaagagtca | tggtaaggag | 960 |
| atgggtgaag | gaaaatttag | caacaggtaa | ttgaagtcct | attggatatt | tcatgtttaa | 1020 |
| atagatattc | tatattaaac | actaatttaa | atgtaataaa | ggccaaaggc | ctctgtatga | 1080 |
| aattagattt | aaactttctt | attttaggga | ataaaacatt | attgatcaaa | cagtatctgt | 1140 |
| tataacataa | aattataggt | agggcaggct | aagtgaacag | cattgaggat | tttctgaatc | 1200 |
| cctaacctaa | atttatagge | acatactgct | teetttgact | tcaggaatga | tcaggtttca | 1260 |
| | | tagattgcag | | | | 1320 |
| taatggccac | cygycctyct | aaagaaactt | cactcactat | tattacctot | atattacca | 1380 |
| tecacaateg | gractigaty | tatgtaatgt | aaaaaacata | taecaecege | aaaaataatt | 1440 |
| agetgeetag | catacatcag | tatytaatyt | aaaayacaca | gageaagaa | cacctataat | 1500 |
| taacttacct | catcaagaat | gtgcccctac | aggeegggeg | atanganatt | tgagagaga | 1560 |
| cccagcattt | tgggaggccg | aggcaggtgg | accaccigag | gccaggagcc | taggactage | 1620 |
| ctggccaaca | tggtgaaacc | ccgtctctac | taaaaaatac | aaaaattagc | tgggcatggt | 1680 |
| ggcgtgcacc | tgtaatccta | gctactcagg | aggctgaggc | aggagaatcg | cttgaacctg | |
| | | | | ctccagcctg | ggtgacagag | 1740 |
| tgagactctg | tctcaagaag | gaaaaaaaaa | aaaaaaaa | | | 1779 |
| | | | | | | |
| <210> 1174 | | | | | | |
| <211> 1473 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1174 | | | | | | |
| cggggtggta | ggcaaaggtg | cttggggtcc | ggccaacgct | tgggctgggc | acagggcgga | 60 |
| tcagtagatt | gggtcagata | agacgccatt | tgaccaggtt | cacgtttttg | tggatcgagg | 120 |
| ggtttcccat | ggagtgatat | aatgggggcg | cctactagga | agtgcagtgt | tcagtggctt | 180 |
| tctctatctg | ttcctttcct | cagcgcccag | tgtagcgcgt | ggcgttccat | ataagttgtg | 240 |
| _ | | _ | | | | |

```
gaattgaaat ggattccagg gccatgccat tccccttctc tcattctcct cgctctccac
                                                                      300
ccccctccc ccgccaatgt cctggaagga cgccctttag tgggtgcctc ctaggagctt
                                                                      360
                                                                      420
ggagcagctg gcagctctct tgccgggctt gcacggcacc cgggctcagt tgtaggtggt
aagggggctg gaagactgtg tccggctcct gccttgggga ttccgaattg aatccgcgct
                                                                      480
gagactagaa cacgccctcc caagggagca gtcccagagt catccacccg aggcggatta
                                                                      540
                                                                      600
atcttctctg agtagaaatg tgaaaagccc acaccggcca ggaaccctcg cttcgattca
                                                                      660
ctttattttc cagccagcga ttttcctttg aacataggga tcccatccag gaggaggaga
                                                                      720
cacageteet agaaacagga teegeegggt ceteeteetg egegggtaga egeagaacgt
                                                                      780
tcccacagtc tactttatgc gagcgtggca cccctgcttg aggcacccca gagcaccctc
                                                                      840
gggccgctcc ttttcacccg aaagatagga tcaccccca gttaagtcgc ttctgggttt
                                                                      900
tccgaaactc acctgacact cccaacaccc cgaccccgtc ccggggctcg ctgctgccac
                                                                      960
ctactgccca actcgaatga aatttcagac gcatgatcaa gcccagttta atagggagga
                                                                     1020
aaaaaaaaaa ccttttcttc tccatgactg gggctaagag ctgttctggg acaagcatgt
                                                                     1080
atgtgtgtgt ggtgggatgg gatgggatgg ggtgggagga gggggcagca ggggattttt
                                                                     1140
ctagctggtg ccagagcagc caggcctctt agaggtgggg tgagtctggc cattgtgcaa
                                                                     1200
ccccttccag ttcctctgag cagataatag ctgaatccag atggtgacag cccgtgtgtc
                                                                     1260
accgtttcca gttgagtcta ggatatgagt aactggactg aacaaaaggc ctttaaagag
                                                                     1320
accagccage ttectagaag agaggagatg ctactcatte taggggtggg gtegggtgtg
                                                                     1380
gggggataaa caaacaagtg gaaaacccat tcgcaggatt ccataccctt cctgtgagaa
                                                                     1440
ttgtaactca aggctgctta cacttgagtc ggactgtagg caggttgctt aaggctgcat
                                                                     1473
tgtcccagcc tccccaaaaa aaaaaaaaaa aaa
<210> 1175
<211> 779
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (652)
<223> n equals a,t,g, or c
<400> 1175
cccacgcgtc cgcatgagtg gtaggaaagg attactgtca aaaataccta tttcaggtgt
                                                                       60
cacagtcaat aatagcaaga tagcataaat tgactttttc cgccctaggg atatatagtt
                                                                      120
tatcttcttc agatttctga ggattaaccg aagcaatttt taccagcatt cacttcttcc
                                                                      180
taacgttgtc agactgccct ccttcaagga aatctcaaat ctcttctgga agtatatggg
                                                                      240
acatgaaatc tagcaggtta aaacttacta taaatgtgtc atctgaagaa tgcaatctca
                                                                      300
tttcctcaaa gatttccacc ctgaccctgc cctggacaag cacttcttgc tttttagaag
                                                                      360
taagacctat aaatcctgta agtaagttac agggctctac attaggaaca accaggcata
                                                                      420
ggcaggggkc ttgtctccaa aggaccttcg gkctatcaca gcataatgct ggcactaaac
                                                                      480
ttactgtggt aaactacagc aaacagatca ttagaaagac aacacgcaaa caatgtacaa
                                                                      540
                                                                      600
tgtaattagc cttttctaac cagtgtaccc ttggcttcct aaacaataac aaaaacaagt
gacacagaac acataacagt gagaagtaac gactagttca taatataaaa gncctttata
                                                                      660
ctttttcaat aaatacggta tttggttaaa aaataattat gttgacttag wgattaaaat
                                                                      720
ttgtttaaat ctattactaa aaaagaacac gcaatgatac acaccaaatt taaaaaaaa
                                                                      779
<210> 1176
<211> 1332
<212> DNA
<213> Homo sapiens
<400> 1176
                                                                       60
cccacgcgtc cgtttacatt gactggttta tgaatgttaa accagccatg catttttggg
ataaggcaca tttgctcaga tatattcttt ttcttatctt ccccagtttc tctcattccc
                                                                      120
                                                                      180
cataatgctc cagaatttct aattgccaaa atgcccttta aatacttgtt catgggtttt
                                                                      240
atctctcaca ttctctccgc tccttcttca gaaactcttc acctgtttca cttacctagt
                                                                      300
aaaqagtctg aagcagatga ctgattttac atttttctgg gaaattcaag cagttcattg
                                                                      360
aagattatct tttggcatta agaaaatgca atcaaggtca ggcgtggtgg ctcacgcctg
                                                                      420
taatcccagc actttgggag gccgaggcgg gtggatcacc tgaggtcggg agttcgagac
                                                                       480
cggcctggac caacatggag aagccccatc tctactaaga atacaaaatt agtcaggcgt
```

| ggtggtgcat gcctgta | atc ccacctgctt | gggaggatga | ggcaggagaa | tcacttgagc | 540 |
|--|-----------------|--------------|-------------|------------|------|
| ccgggaggcg gaggttg | cag tgagccaaga | tcatgccact | gcactgcagc | ctagaaaaca | 600 |
| agagggaaac tccatct | caa aaaaaaaaa | aaaaaagaaa | ttgcaatcaa | gtgtcactta | 660 |
| atgatgggga tacattc | | | | | 720 |
| tagaacatac ttacaca | aat ctagatggta | taacctactg | cacacctatc | ctatatggta | 780 |
| taacctagtg ctcctag | | | | | 840 |
| aattataaca ctatggc | | | | | 900 |
| taccgtagta aactttt | atg ggaccaccat | cataaacaga | gttcatcatt | gacctaaatg | 960 |
| tcattatgca gcagatg | act ttattcaatt | tatatttaaa | gagaaccaca | gttctgatat | 1020 |
| gttagacatt agtaatg | cca ttcaaaaact | tgagtcaaaa | actacataaa | tatttctgaa | 1080 |
| aatttaaaaa atgtaaa | | | | | 1140 |
| agagtaatat caattto | att taaaaataaa | ctgaagtggc | tgggcacggt | ggctcacacc | 1200 |
| tgtagtccca gcacttt | ggg aggccaaggt | gggcggatcg | tgaagtcagg | aaatcaaaac | 1260 |
| catcttggcc agcatgg | tga aaccccgcct | ccactaaaaa | tacaaaaaaa | agaaaaaaa | 1320 |
| aaaaaaaaa aa | | | | | 1332 |
| | | | | | |
| <210> 1177 | | | | | |
| <211> 2129 | | | | | |
| <212> DNA | | | | | |
| <213> Homo sapiens | ! | | | | |
| .400 1177 | | | | | |
| <400> 1177 | aatatttat | atatatatt | atatatatat | aatatataaa | 60 |
| cacgcgtccg cggacgc | eta tataatatat | gtgtgtgtt | tagagaaaat | attatgaatg | 120 |
| ggtgactgtg agagtgt | gig igiggigigi | ttatgageata | atatatata | catatagaat | 180 |
| tgtgtgtgtg tggcctg | | | | | 240 |
| gactgtttta tgtgtgt tttggagtgt gtttctt | taa aactaaatt | tetectetet | ggatactatg | tgatcatgg | 300 |
| | | | | | 360 |
| gtctcgtcac tgggccg | | | | | 420 |
| gatcctggta ggagccc gggtccgaca tggtggg | | | | | 480 |
| ccacaggtgg tcccggc | | | | | 540 |
| ctcgagactg tctctgc | cca actatageca | cadaatatac | cctatataca | gcactatgtg | 600 |
| ccctgtgct cctgagt | ccg getetggtta | tatagaataa | acatecetee | cccatctcat | 660 |
| agcagaaggg actgago | ata casataasta | aaggaggeee | ataaaggacc | ataccaaaac | 720 |
| cagatgcctc ccagcga | aga taagaggata | acttccacct | catgagtage | tacaacacct | 780 |
| cgggaatgaa tctgttc | cat attetatatt | geeeccaeee | actagagagac | cacaaccctc | 840 |
| aaagtcccca gcaccaa | acac geeetgegee | gggageegge | adddaadccc | acctgacggg | 900 |
| aagctgaggg cagggco | | | | | 960 |
| catcaccctc atcccca | | | | | 1020 |
| cttgagctga tgcctcc | | | | | 1080 |
| caaaagggga aatcctg | aga ctctagacco | gacctccaat | aggggtgtc | acccctggct | 1140 |
| ctgaccttgc tcccgga | | | | | 1200 |
| | | - gggccgcccc | | | 1260 |

ggggaagagc cactcctagt gtcctagaga tgtggcccca ggcgctttct ccaccaggct

gcaaatccct tcccaagctc acatcccca agtcgtcatc cagcccaagc cgagccccca gttgcacccc aaggccttag cacaaggctg cagctggtcc tcgagccatg atggacactt

aactcctgtc ccatgcatgt gccagtgcct cacttactca ccttggtgaa tccttacagc

cctgaggagg tgcctgttcc tcctcttctc cctttttact gatgtggaaa ctgaggctga

ggttaaatca ctcactcaag gtcacacagc tgttcaatgg cttagatggg atttgaacag

aagtctgagt gagtccagaa cctgggactt cagccaccgg gagtgtggct cccaactgta

catgcatgca tgtacacaga cacacgctac ccagacactt ctcacacctg atgtgcactt

gggagcagtg ccccggctcc cacctgttct cgtggcacat ctgggtagag cctgggtgtt

gctggtgcct gaggcttgcg tgagagcttt ccacttttcc ctaagtctcc catcaccact

agggttatgt gaattggctg cgcgtgatgg ctcatacctg taatcccagc actttcggag

gccgaggcgg gaggatcact tgaggtcagg agttcgagac cagcctggcc aacatgggga

aaccctgtct ctactaaaaa tacaaaaatt agctgggcgt ggtggctcag gcctatagtc

ccagctactc aggaggctga agcatgagaa tcgcttgaac ccgggaggcg gaggttgcag

tgagccgaga tggtgccact atactccagc ctgggtgaca gagtgaaact gtgcttaaaa

<210> 1178 <211> 2332

1260

1320

1380

1440 1500

1560

1620

1680

1740

1800

1860

1920

1980

2040

2100

2129

```
<212> DNA
<213> Homo sapiens
<400> 1178
                                                                    60
ccacgcgtcc gcactatcaa ataaaaatag ggcatttctt atggtagatg ggagtaagaa
atatcatctt ctgtttttaa aaaatgtaac tatataaatg ttaagaaaga aatctattga
                                                                   120
ataaaagttg gagaaaaaag aggatggttg attttaaact ctactgactt ggttgacttt
                                                                   180
tacttgatat gtgctatctg aaaaaatgga caatggccac tccctcattt cttttttct
                                                                   240
tccttttatt gaattttaac agcagttttg tctggctctt ttcatttctg tgtttatttc
                                                                   300
ctgtaaaatt gtgatgcata atcagagtaa gtttttgttt gtgtatgatt ttgccatgaa
                                                                   360
aagtcactgt gtatctgaag ccaaaattac acttagtatt tcatgcggtt ttggctgatt
                                                                   420
tcctttctat ttttcttcat taagcaagtg ccatcaaggc cagcagtacc catattatat
                                                                   480
gtccagagaa gagccaggcc agatgggaac tgcgtgaaag caaccagtta tcttgctaat
                                                                   540
                                                                   600
tatgccagct agaaccagtt gtattgcatt aaaaaatgtg gaatccaaca acttagctgt
                                                                   660
tcacactcaa ttagcagtgt gctggagaat ggaaaactca agcaaggagt ccatgtgctc
                                                                   720
caggaagtga cagctgcttc cttacccagc atttaatatc catgtaaaat tttttcaata
                                                                   780
aacgttgtga taatttttgc aagaatcatg tatatgttat gtctctaatt catctcataa
tttaaaaaaa acataaagtt cagtggtcta tctccacttt ataacctttc tttagcccac
                                                                   840
                                                                   900
atgaagaata aagtgcaaaa gtaagccaca aattcttgac atgttttcaa aaagaagaaa
                                                                   960
tcagtagaga aaggagaaaa aaatcaggaa gacaacaatt agcgtattta tcataaatga
                                                                  1020
aggaaataaa acatcgagac taaaagaaga ctcaagtgtt tcatttgtac atcttctgag
                                                                  1080
ataaaaatag ctggaaacgg caactcactt cactggcatt tttcgttcca ctgtctgtca
                                                                  1140
cagatgatgc cgagtttctc tttctgactg atcttcaagc tgaaggtaat gtgacagcag
                                                                  1200
gaacattaca attagtatgc gaatacctat cccctgggtt acaaattggc attctttaaa
                                                                  1260
ttctgctatt ctcagctttt ttatttttgt tattaacttt tcattggtca aaacacttaa
acttctaagt aataaataac tctttgaata aatgtgacat ttctctgagt ctgtggcata
                                                                  1320
                                                                  1380
attgaaataa attccatctg aaagtttttt ctgaagttca tattcatctg tttgcaagac
                                                                  1440
aactattgtt cacaggaggt taaaccaata tataatgata tacatattat aaatatacat
                                                                  1500
atttataatt aatattcacc tttaagtctt taatctgcct aagagatcat tttgttttcc
                                                                  1560
tttqttcttt gattttcaga gaatctgagg agggctctac ctttagtata cttatcttaa
                                                                  1620
acaactatat atgtttaact atttaagcaa ttttattcat gaactaaaat gttctaatat
                                                                  1680
aaqacattqc aqttttcttt gaaatttatg cagtttttat tgcttaataa catacatttc
tctcttttaa ccatqqatct caaqtcattt tatgccaata tttctttatg caatatgatg
                                                                  1740
                                                                  1800
tttaatgtaa taaggctaat atatttatca aaacaaagac catatattgg caattttaat
tatagttaaa gttttataac ttcatgcttt gtcaagcttt tatctcaatg taatacagtt
                                                                  1860
                                                                  1920
ctttggtagt aaaattcaac tggtatgtgt ttatgaccct caatgtcaat taaaaactct
                                                                  1980
tgaaagattg acaatttttc aggtgggaga aagaaagcag tcaaaagaag gtaaaaaatg
                                                                  2040
ttcttctct tgacttaccg tggaaatgcc ctagttgatc tatagaaatg gttagtatca
gtggccctgg actaatgaaa ctgagagaag tagaagaaat gacctaaaaa gtcggtgtat
                                                                  2100
                                                                  2160
cattaagaag ggaaatcatc aatcagcacg atcccttttg ttaattcaag caccattaag
taatgttctt aggataagca aaaactgaat cattaaacat attttcactt tttgttttgc
                                                                  2220
tcagggggga taatgaagta ttaattttat aatatatgct tgaaaatagt acagtttgga
                                                                  2280
                                                                  2332
<210> 1179
<211> 1907
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (24)
<223> n equals a,t,g, or c
<400> 1179
                                                                    60
aagtcatatt actaaaagtt tttnccgttc aggaggagtt ggtctcactt ttttgtgttc
agatagtgga gaactgtgct cccgttctag ggccctccct cctttctctt tattaacttc
                                                                   120
tccccacggg agaaagaatg gcaaattgga aagctcgggg cttgacatta atatgagtga
                                                                   180
                                                                   240
300
gggtggaggc ctgcagaaag gtgccagcta tcctctactt tttgcctgct gtcttcaggc
                                                                   360
aataaggaga ttagggaggt gttcccctgg caggcctaat ctggtctata cttcttctag
```

```
tccagccttt gcctggacag gtaaatcagt tcaggtttgc tctgtgaacc tggccacctt
                                                                      420
                                                                      480
caggtctgga agaagaacat aggaagccct gctgacgtca ggcttaagct gtattctcca
                                                                      540
gcacatttac cagaagcctc tggggttgtg tgtgaccatg cctcgaataa agcccatgtt
                                                                      600
ctgatcccca tctgtctgtc agatgttatt tgtggatgtt atttgtggtt atgcccagtt
                                                                      660
ggttagaacc tagaaagtga taaaagtgag ccatgcagcc gggcacggtg gctcatgcct
gtaatcccag cactttggga ggatgaggtg gatggatcac ctgaggtcag gagttcaaga
                                                                      720
                                                                      780
ccagtctggc caacatggtg aaacactgtc tctactaaaa aatacaaaaa ttagctgggc
gtgatggcat gcgactgtaa tcctagctac cgggaaggct gaggcaggag aatcccctga
                                                                      840
                                                                      900
acccaggagg tggaggttgc agggagccga gactgcgcca ctgcactcaa gcctgggcaa
caagagctaa actctgtata aaaacaaaaa ataacaaaaa aactagcgag ccctacagct
                                                                      960
                                                                     1020
gcaggctgag gttctagttt tggcaataag ctaaagtgta aataatttta catttaaaac
                                                                     1080
tatggaacaa atagaggtgg gacatgggct gcccctgccc acctctccag ccagttcccc
gactcttcgt cttctttctg ctgcatgtgg tctgaccatc ttagttctca agtttgmcaa
                                                                     1140
actttttttc agccatgtgt cctttgccta tgctgktttc tctgctaact ttctcttttt
                                                                     1200
tttctctctc ttacttgctg cttttatggt caagttctaa ctcttcaagc gtacacttaa
                                                                     1260
                                                                     1320
atagtacctt ctytgacccc gtaggctagg ttgattgctt cagtgtacta aggcaaaaat
                                                                     1380
accetgagta tetgtgetea ttaacetetg tgttteeett ttgtaagatt tateacaatt
                                                                     1440
gtaatcaaat atttatgcta tgatatattg gttgcctttc tagattttct aacagtcttc
                                                                     1500
tttgcattgt tacataaagt gtttagtgca gagctgggca ctcatatttg gtgcctgagg
gagatttgtt gagtgaataa aatagcagtg tccagcagcg acatagactg ctgagatatg
                                                                     1560
                                                                     1620
gcatgtcaga gtctgaaagg ctctgtccag ttggcaagtg gaattcattg gatgttttac
                                                                     1680
aaagaatagt tttagtaagg kggtggggac ggaagtgagt ttgcaaagta tcttataaaa
                                                                     1740
agctagactt aattactcat ttacgcaaca ttggaaccct tacaagtgat ttctctrctg
agagcaactt ttcttgagtt ttactaactc agtagacact gtcagaatct gccagattac
                                                                     1800
                                                                     1860
aacaaagggg taaaaattcc tgatcacttg aggkcaggaa ttcaagacca gcctgggcaa
caaggtgaaa cccgatctct actaaaaaaa aaaaaaaaa aaaaaaa
                                                                     1907
<210> 1180
<211> 1639
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1623)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1624)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1625)
<223> n equals a,t,g, or c
<400> 1180
                                                                        60
gaactgtcag actctcaagt aaaagcagcc agaaagggga aaaaaaggta acagattcag
cattgtccaa aagttccaga ccagtgatta atgtgtaaga taatggactt gggaaatgag
                                                                       120
                                                                       180
taaacactcc ccatgctccc tgctttgtgc ttgaacgact tgatgacaag ggcagagcaa
                                                                       240
ggtgagaatt taaacaggac cacaggaaaa aaaaaaaaga caaagactgg caacaacata
                                                                       300
atgcgaggga gggggagttt actggtttgc agtctaaaag gtacataata actttcttca
                                                                       360
aagcaggcct taacagtgta ctaatttaaa cttcaacatg ggcatggaat tacccgtaga
aattatatgc cactcagtca tcttttaata taccggatat ttatatgtac ttgttttcat
                                                                       420
ttatttgttg ttaacttcct tcggcagacc cattaagcat ttagatacat atttgtgttc
                                                                       480
agatgtatca tcctcaggga aaggagatgc tgtattttga ttaagtggtg catttcaagg
                                                                       540
tatttcaagc tattcttaaa taattatata ggcacatttt agagtattcc tccataaaaa
                                                                       600
                                                                       660
aatatttgag gatctggatg cettgetage tgtcgcactg catttettag caatctgtca
                                                                       720
tcacttgaac ttacactttt cttgatcaca ttgaagacct ttyatatgta taaaacattt
                                                                       780
atttactttg aataaaactt gttttgtttc caggttctca ctccctgtat ttctttagac
```

| | gtgttttcca | agastatatt | tttataggat | cagtagetta | aacatgttaa | 840 |
|-------------------------|--------------|--------------|------------|--------------|-------------|------------|
| acctacagag | gttttacata | gggatetett | tetactetat | caatctottt | taaatgcaca | 900 |
| ttttgtcagt | gacacccact | aaaacctact | ttakatataa | aaaaatcctc | acaatttctc | 960 |
| catcacaact | ktacccattm | gaggatttat | taattaataa | actttcacca | ataaccataa | 1020 |
| tggacaaatg | Ktacccattm | ccttaaacyg | toutattata | acctegagea | atetteaata | 1080 |
| agagactgtg | ktcacagscc | taaateteta | tawigitgic | atacatatt | catcatttt | 1140 |
| gtcaatttaa | aaatatttga | aattatcata | ttggttetga | atacaatatt | tangtagata | 1200 |
| cttttaatca | tagagaggtt | tgtaattatg | tttatgtata | ttttgtaaat | taagteeata | 1260 |
| atttaaaaaa | tcttgatatt | gcatcttcct | aaaggcactt | cagtgattca | accctgaaaa | 1320 |
| gcatgataat | acagaaatgc | cattgtgatt | atcaacaact | ggattgctac | tttcaaagta | |
| cctttaaggc | caggcgtggt | ggctcacacc | tgtaatccca | gcacgttggg | aggccgaggt | 1380 |
| gggcagatca | cctgaggtca | ggagatcaag | atcagcctgg | ccaacatggt | gaagccccat | 1440 |
| ctctacaaaa | atacaaaaat | tagctgggca | taatggcggg | tgcctgtaat | cccagctact | 1500 |
| caggaggttg | aggetggage | atcgcttgaa | cctgggaggc | agagattaca | gtgagccaag | 1560 |
| attgcaccat | tgtactccag | cctgggcgac | agagcaagac | tctgtctcaa | aaaaaaaaa | 1620 |
| aannnaaaag | | | | | | 1639 |
| | 33-333 | | | | | |
| <210> 1181 | | | | | | |
| <211> 1858 | | | | | | |
| <211> 1030 <212> DNA | | | | | | |
| <213> Homo | canions | | | | | |
| <213> HOMO | saprens | | | | | |
| .400- 1101 | | | | | | |
| <400> 1181 | tcgacccacg | aataaaataa | totoatotoa | acactcctta | atctacttac | 60 |
| aattcccggg | tegacecacg | egreegergg | cotgatocca | ccctttatat | ggaagettee | 120 |
| ctctcccagg | acgcctgcac | attacctctc | catactycay | atataattaa | cctaecaaca | 180 |
| tacatcactt | tgctgtgtgt | gtttacacat | graggrilla | cigiactige | gaggettggt | 240 |
| cacgggagtg | caggccacac | cccaacccac | accaactgcc | actyaayaca | atactataca | 300 |
| gggcacagaa | ccaagaaccc | cacccctgcc | agcacctaac | cettgageta | argergea | 360 |
| gataaatagg | gaccttctta | taccctgagt | gaccacagtt | getttgaggg | gcacagagaa | 420 |
| ggcaccatgg | cctgcactgg | ccagcagccc | accetgaace | aacactacct | ccagtgcaac | 480 |
| acacacacag | caggggaccc | ctggcccaca | ccccagctgt | cttgcctcca | ccactgggtg | |
| aacgccctca | gggaggcagg | gaatittgca | tccactagca | ttctgccaca | gttgccacac | 540 |
| tttggtcccc | tcagtgcagt | ggactccaaa | cctccaagag | ccagggaaca | aagttggggc | 600 |
| ccaagacaag | ttccccagat | ttaaagcaca | cagtccagga | attgggagcc | gcacattggc | 660 |
| cccctaaaa | tcctccaaaa | acaaagccag | ttagttgaat | ccaccttatc | ccacaatgaa | 720 |
| actctcaaga | tcatcaaata | caataaaaga | aaaatactct | gtccgaaagt | cagcaacctc | 780 |
| aaagatggaa | ggtggataag | cccataaaga | tgagaaagaa | tctgtgtgag | aacactgaaa | 840 |
| actcaaaaag | tcagaatgcc | ttctttcctc | caaatgactg | tatcaactct | ccagcaagtg | 900 |
| ttcagaactg | ggctgaggct | gagatgtctg | gaatgataca | agcagggttc | aggatatgcg | 960 |
| taggaacaaa | gttcactgag | tgaaagaagt | atgttgtcat | gcaatacaag | tgagctaaaa | 1020 |
| atcattotaa | aacattgcag | gagetaacag | acaaaatagc | aagtataaag | aagacataac | 1080 |
| caacctaata | gagctgaaaa | gcacactaca | agaattttca | taatgcagtc | acatggtgat | 1140 |
| tatatataaa | tggattatga | aaattattgt | agtgtgtgtg | ggcacccgag | attgccctgt | 1200 |
| aargagatat | ggccagacag | agatectaga | agaggcaagc | agactaagga | gcgctgaggt | 1260 |
| gagagagagt | ccatctcatg | tacaadacca | cccagcagaa | tagaccaagc | tgaggaaaga | 1320 |
| cacaccagca | ttassacta | getttetgaa | ataaaacagg | cagacaagaa | tgggggaaaa | 1380 |
| accccagage | atgaataaac | aaaacatcca | agaaatatga | gattatataa | acgaccaaat | 1440 |
| aayaayyaaa | ttagtgtacg | taaaaaaaat | aaggagaatg | gagccaactt | ggaaaacata | 1500 |
| ctatgactga | tcattcatga | cgaaagagac | aacctatcca | gacagaccaa | cattccaatt | 1560 |
| cttcagaata | . ccattcatga | gaacacccc | accecaecea | gateatecce | aagacatata | 1620 |
| caggaaaccc | ayayaattt | . agtaayataa | gecaegagaa | taaagggagg | tagggagaaa | 1680 |
| atcatcagat | tetecaaggu | . Caaaacyaaa | gaaacaacgc | . cadaggeage | ctgagagacct | 1740 |
| ggcagtgtca | cctgcaaagg | gaattecate | agacttagca | tttcacctag | tataacaaa | 1800 |
| acaagccaga | aaagatatto | aacttcttaa | ayaaaayaaa | tttcacgtag | tatggcagag | 1858 |
| acagatatac | catataataa | catggtgtta | ttataaatya | lllaaaaaaa | aaaaaaaa | 1050 |
| | | | | | | |
| <210> 1182 | | | | | | |
| <211> 1036 | 5 | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1182 | 2 | | | | | C O |
| aattcccggg | g tcgacccacg | g cgtccgagtt | gataattatt | : gaatgtggat | aatgggactg | 60 |
| | | | | | | |

| ttgtatatac t | totattota | taattttaaa | ataagcataa | actctcaaaa | atgggagagg | 120 |
|--------------------------|------------|------------|------------|------------|------------|------|
| aaacggcaac a | agattttgg | aagctggagg | caaatatatt | agtggtaact | gatttaacca | 180 |
| acctgagagg g | ctgaatctt | aggtcagcag | taggaaaggc | aaactgcttt | gctttacaga | 240 |
| tttcccaaat g | tcttaggaa | tttgtgacat | caggaacctc | tagaagtaga | tgtataagga | 300 |
| tagaagettt ca | attcaaagc | ggtttaaaaa | aaggccctaa | ataccctctt | cagttccatg | 360 |
| tagccaggat g | aaaactgac | tcaaaatttt | ttctctggaa | agagtaaaat | agaagtctgg | 420 |
| attgcactgg to | agttgagtt | gtagagctac | taaataggga | ttaaataact | gtgtgcattc | 480 |
| tggttgttct a | ttactcaag | gaataaaact | aaagggcttg | ccccaaacct | aaagataatt | 540 |
| acaggagaaa a | aaaaaaaac | ccagccagtt | accetteagt | gagcccacaa | tcactatgct | 600 |
| ccatcccttc a | gtctcccta | tcaccttttt | tatttgtcac | acttaaataa | gagcaaaaac | 660 |
| agccaaggat t | atcaggcat | ctcaggaaag | tctctaacat | gaaagagaga | gacaaaaaac | 720 |
| cattggctgg g | cacaataac | tcacccctgt | aatcccaaca | ctttgggaag | ctgaggtggc | 780 |
| cagatcactt g | aggtcaaga | gttcaagacc | agcctggcca | acatggtgaa | accccgtctc | 840 |
| tactaaaaat a | caaaaatta | gccagccatg | gtgacatgtg | cctgtaatcc | cagctacttg | 900 |
| ggatgctgag g | catgagaat | cacttgaacc | tgggaggcgg | aggttgcagt | gagccgagat | 960 |
| cacgctactg c | actccagcc | tggctgacag | agcgagactc | tgtctcagaa | gaaaaaaaaa | 1020 |
| aaaaaaaaa a | | | | | | 1036 |
| | | | | | | |
| <210> 1183 | | | | | | |
| <211> 849 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo s | apiens | | | | | |
| | | | | | | |
| <220> | | | | | | |
| <221> SITE | | | | | | |
| <222> (844) | 1 | a | | | | |
| <223> n equa | us a,t,g, | or c | | | | |
| <400> 1183 | | | | | | |
| ccacgcgtcc g | rtacttttag | tagagccggg | gtttcactgt | gttggccagg | ctggtcccaa | 60 |
| attcctgact t | caagtgatc | cacccgcctc | agcctcccaa | agtgctggga | ttacaggcgt | 120 |
| gagcactgca c | ccggcctca | cttatcatta | ttaaactcta | acatgtgttg | atcacttaaa | 180 |
| actctcgagt t | gtactgtgt | gacatgtgat | agctacctta | tttcattact | tcatttattc | 240 |
| ccttgaggct t | ggagactga | tgtgtgaggg | aggagtctga | gggctcctgg | gccctcgccc | 300 |
| atgggagctg g | gtgcgtggc | tgtcctgttg | ttaggacaag | ctgcaggaga | gactgtgttt | 360 |
| ccttggccat g | tcccgtggg | gcccagcatg | atgtcctgag | tagcagaaag | atgggtgagg | 420 |
| gatgggctgc c | tggatgatg | actggctgat | gcatttctgc | cctcagtttt | caccatggcc | 480 |
| aggatctctt c | agagtcatg | attcaatgga | atttatacca | agtgtgccct | gatttggggg | 540 |
| tgtttctcag a | tgatgtgta | gtgccccac | tcagaggagc | cagaagccaa | agaaactcag | 600 |
| atacacttga t | tctctaatt | cattctctca | caggaattgt | cttctaaact | gcaaatatta | 660 |
| aacagcgcag a | agaatggtct | cacaagctca | gaagggatct | gggaggaaat | gaactgctaa | 720 |
| gagggttatt t | tcagctact | ttcacttact | gctttaaact | gtgcttctat | tgtttgaggt | 780 |
| ttttgcagtg a | agcacatacg | acttatataa | taaaaaaaat | tccattttga | aaacaaaaaa | 840 |
| aaanaaaaa | | | | | | 849 |
| J10× 1104 | | | | | | |
| <210> 1184 <211> 1759 | | | | | | |
| <211> 1/59 <212> DNA | | | | | | |
| <213> Homo s | saniens | | | | | |
| -210 HOMO S | | | | | | |
| <400> 1184 | | | | | | |
| ccacgcgtcc g | gctataatcc | caacactttg | ggaggcccag | gcgggaggat | cacttgagac | 60 |
| caagagttca t | gaccagcct | gggcaacata | gtgagactca | gcctctattt | ttaattgaaa | 120 |
| aaaaaaaaaa a | agcctgatg | cagtttcatg | ttaaataatc | agtattttt | gtattattct | 180 |
| gtctctcttc a | atcttacaaa | aaaagtagct | ttgaaacaac | taatatgctc | ttttttcttt | 240 |
| gcttctgctt t | cttcagctc | ttccatgtct | ataaagccaa | ccccttctgc | tcagctcact | 300 |
| agaacacctt t | tccatgtta | tgaaattaag | tgttgccaca | ttctagagtt | gcaataaaac | 360 |
| caattgagat c | ctttaatcta | aatttgttgt | aattttgtcc | tttgacactc | tgtaaatacg | 420 |
| gttttataat o | ctgtgttttt | tccccacttt | atactataga | catctttctt | gttaataata | 480 |
| tatacttact a | aaatatgatg | acatagaatt | tcattgtatg | ggctgtacca | taatttacca | 540 |
| agccaaactc c | ctgttagaca | tttagattta | ttctagttct | tagctgttaa | cagtgtgcta | 600 |

| gaaatgctgt | atgtgtgtgt | aatttcacat | atatataatc | atttacttat | attactagaa | 660 |
|--|--|---|--|--|---|--|
| tttattqtta | aattctagac | ctggaatttc | caggtttaag | agtatgcaca | atttatattt | 720 |
| ttaaacacct | tgataaattg | tccttcaaaa | gttgtatcaa | tttgtagtct | gcttacatgg | 780 |
| | | | atgtagtatt | | | 840 |
| attggatgtt | ttctttttt | tcttcctaaa | tctcatatgt | ggtggaaaga | tattttcttt | 900 |
| taaaaacaca | ttctcagact | gggtgcagtg | tctcacgcct | atgateceag | cactttggga | 960 |
| gaccaagata | antagateat | gaggtcagga | gttcgagatc | agcctgacca | acqtqqtqaa | 1020 |
| | | | gccatgtgtg | | | 1080 |
| accedattee | agaggaac | acaaagacta | agcttgaacc | taggegeaeg | antgaggga | 1140 |
| cagetacteg | ggaggetgag | gcaygagaac | agettgaace | attatatata | 22222222 | 1200 |
| gatcatgcca | ttgcactcca | geetgggeaa | caagagcaaa | accongre | aaaaaaaaaa | 1260 |
| cggggggtat | tttttagtge | agageteeee | aaagcctcta | acatacticc | tagastaga | 1320 |
| acttaagcaa | ctcagaagaa | aagtttttca | gaaagacaaa | agcatttatt | tgcaatagag | 1320 |
| | | | tgctcaatcc | | | |
| | | | agaaactggt | | | 1440 |
| | | | tggaccatgg | | | 1500 |
| | | | ggatgacctg | | | 1560 |
| | | | attagccagg | | | 1620 |
| atctcagcta | ctcaggagga | tgaggtggga | ggatcacttg | aattcgggag | gtcaaggctg | 1680 |
| caatgagctg | tcattgcacc | gctgcattcc | agcctggatg | atggggagag | accctgcaaa | 1740 |
| agaaaaaaaa | aaaaaaaa | | | | | 1759 |
| | | | | | | |
| <210> 1185 | | | | | | |
| <211> 2220 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1185 | | | | | | |
| | ccacacatcc | acccacacat | ccgctaaaat | taaaatattt | ctctgagcct | 60 |
| ccttccctta | ccacatcagt | gacctagact | tgcacttcta | aggccaaaag | cacaggcata | 120 |
| aatattttaa | agtataactt | taaagagaac | atgcatacat | ctctattacc | accttaactt | 180 |
| tactactaga | atatacccaa | acadaguttea | gggcatacca | caaatgcact | cagcaatatt | 240 |
| gaggggtga | tttttaaaa | cctacttaaa | aactcgcctg | taatttaaaa | tagtgagacc | 300 |
| cagggcccga | gazagtagg | tagtttttag | gaacgcctga | taacctacac | atgractcaa | 360 |
| | | | ggggggcatt | | | 420 |
| | | | tttgtttatt | | | 480 |
| | | | | | | 540 |
| | | | ttggaggttt | | | 600 |
| | | | ttttctctct | | | 660 |
| | | | tcaggccgca | | | 720 |
| | | | gtcaaaaatg | | | |
| tgtaaagcct | ggcctggtca | cttacccacc | tagtatgacc | ttgaacaagt | cacttagtgt | 780 |
| ctctaggtct | cagcttcctc | atccatagac | gtggatgtga | tagtaataga | ctctgcctca | 840 |
| aagggctgta | ggcagagtaa | ataagctaat | acatgtgaaa | tgcttggaac | agtgcctagt | 900 |
| aagtacatgg | caagcacaag | gcaagttagc | ttggatcctc | acccagtgct | gcctcactta | 960 |
| attcactggc | cctgtgtccc | tgtttaacaa | tctatacaca | aaaagtaagt | agaatggcct | 1020 |
| aaaaaggcaa | actgcctcct | caaaccaaca | ggctaacaga | gacagtgaga | atggcactta | 1080 |
| | | | ggtatacagc | | | 1140 |
| | | | aataaattga | | | 1200 |
| | | | acaaatgaaa | | | 1260 |
| | | | catgtacggt | | | 1320 |
| aaaatactac | caaagaaatt | aagataatgt | caatgcatta | catattgcca | ctggctctga | 1380 |
| gtttctcttc | | | | | | |
| | ctaagctatc | atccccaaag | ctttgatagt | tgtttgcaca | agacagtttc | 1440 |
| agcaagaact | ctaagctatc cttcaaaagg | atccccaaag accctacgcc | ctttgatagt caagttctgt | tgtttgcaca cagagaagtg | agacagtttc aagagtgtca | 1500 |
| agcaagaact tctggaggaa | ctaagctatc cttcaaaagg aggttcagtg | atccccaaag accctacgcc ctggagagag | ctttgatagt caagttctgt cattctgctc | tgtttgcaca cagagaagtg agtcataaag | agacagtttc aagagtgtca cctgttaaag | 1500 1560 |
| agcaagaact tctggaggaa gaaggttaag | ctaagctatc cttcaaaagg aggttcagtg aaggaagacc | atccccaaag accctacgcc ctggagagag aggagtagca | ctttgatagt caagttctgt cattctgctc cagatggatt | tgtttgcaca cagagaagtg agtcataaag ctacagttct | agacagtttc aagagtgtca cctgttaaag attcatctgc | 1500 1560 1620 |
| agcaagaact tctggaggaa gaaggttaag | ctaagctatc cttcaaaagg aggttcagtg aaggaagacc | atccccaaag accctacgcc ctggagagag aggagtagca | ctttgatagt caagttctgt cattctgctc cagatggatt | tgtttgcaca cagagaagtg agtcataaag ctacagttct | agacagtttc aagagtgtca cctgttaaag attcatctgc | 1500 1560 |
| agcaagaact tctggaggaa gaaggttaag atttccagga | ctaagctatc cttcaaaagg aggttcagtg aaggaagacc catgttgact | atccccaaag accctacgcc ctggagagag aggagtagca ggaccaccag | ctttgatagt caagttctgt cattctgctc cagatggatt gcatccagtt | tgtttgcaca cagagaagtg agtcataaag ctacagttct tcgacttgtt | agacagtttc aagagtgtca cctgttaaag attcatctgc gggtcttgag | 1500 1560 1620 |
| agcaagaact tctggaggaa gaaggttaag atttccagga gcttgttttc | ctaagctatc cttcaaaagg aggttcagtg aaggaagacc catgttgact cttgtttgta | atccccaaag accctacgcc ctggagagag aggagtagca ggaccaccag aaatggggat | ctttgatagt caagttctgt cattctgctc cagatggatt gcatccagtt aagaaaataa | tgtttgcaca cagagaagtg agtcataaag ctacagttct tcgacttgtt gaagacgaac | agacagtttc aagagtgtca cctgttaaag attcatctgc gggtcttgag aagcaggtca | 1500 1560 1620 1680 |
| agcaagaact tctggaggaa gaaggttaag atttccagga gcttgttttc tggtgagaat | ctaagctatc cttcaaaagg aggttcagtg aaggaagacc catgttgact cttgtttgta taaatgagat | atccccaaag accctacgcc ctggagagag aggagtagca ggaccaccag aaatggggat aatagatgta | ctttgatagt caagttctgt cattctgctc cagatggatt gcatccagtt aagaaaataa gagtgttgga | tgtttgcaca cagagaagtg agtcataaag ctacagttct tcgacttgtt gaagacgaac tgcagttcct | agacagtttc aagagtgtca cctgttaaag attcatctgc gggtcttgag aagcaggtca agtattcagt | 1500 1560 1620 1680 1740 |
| agcaagaact tctggaggaa gaaggttaag atttccagga gcttgttttc tggtgagaat attcagtaca | ctaagctatc cttcaaaagg aggttcagtg aaggaagacc catgttgact cttgtttgta taaatgagat cagtattcag | atccccaaag accctacgcc ctggagagag aggagtagca ggaccaccag aaatgggat aatagatgta gaaagagtgt | ctttgatagt caagttctgt cattctgctc cagatggatt gcatccagtt aagaaaataa gagtgttgga caatatcatt | tgtttgcaca cagagaagtg agtcataaag ctacagttct tcgacttgtt gaagacgaac tgcagttcct aatattaata | agacagtttc aagagtgtca cctgttaaag attcatctgc gggtcttgag aagcaggtca agtattcagt agatatgtaa | 1500 1560 1620 1680 1740 1800 |
| agcaagaact tctggaggaa gaaggttaag atttccagga gcttgttttc tggtgagaat attcagtaca aataatttat | ctaagctatc cttcaaaagg aggttcagtg aaggaagacc catgttgact cttgtttgta taaatgagat cagtattcag attattaata | atccccaaag accctacgcc ctggagagag aggagtagca ggaccaccag aaatgggat aatagatgta gaaagagtgt ttatcccaag | ctttgatagt caagttctgt cattctgctc cagatggatt gcatccagtt aagaaaataa gagtgttgga caatatcatt cacttgagag | tgtttgcaca cagagaagtg agtcataaag ctacagttct tcgacttgtt gaagacgaac tgcagttcct aatattaata tttccctgaa | agacagtttc aagagtgtca cctgttaaag attcatctgc gggtcttgag aagcaggtca agtattcagt agatatgtaa agataccaag | 1500 1560 1620 1680 1740 1800 1860 |
| agcaagaact tctggaggaa gaaggttaag atttccagga gcttgttttc tggtgagaat attcagtaca aataatttat aattctgagc | ctaagctatc cttcaaaagg aggttcagtg aaggaagacc catgttgact cttgtttgta taaatgagat cagtattcag attattaata agggggctgg | atccccaaag accctacgcc ctggagagag aggagtagca ggaccaccag aaatgggat aatagatgta gaaagagtgt ttatcccaag ttcacaacta | ctttgatagt caagttctgt cattctgctc cagatggatt gcatccagtt aagaaaataa gagtgttgga caatatcatt | tgtttgcaca cagagaagtg agtcataaag ctacagttct tcgacttgtt gaagacgaac tgcagttcct aatattaata tttccctgaa actttgggag | agacagtttc aagagtgtca cctgttaaag attcatctgc gggtcttgag aagcaggtca agtattcagt agatatgtaa agataccaag gctgaggcaa | 1500 1560 1620 1680 1740 1800 1860 1920 |

| ctacaaaaaa ta | acaaaaatt . | agccaggcat | gatagtgtgc | acctgtaatc | ccagctactc | 2100 |
|---------------|------------------------|--------------|--------------|--------------|------------|--------------|
| gagtagetaa ge | atgagaat | cgcttgaacc | tgggaggcgg | aggatgcagt | gageegagat | 2160 |
| cattccactg co | ctccagcc | ggggcgacaa | agtgaggctc | tgtctcaaaa | aaaaaaaaa | 2220 |
| | | | | | | |
| <210> 1186 | | | | | | |
| <211> 2702 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo sa | apiens | | | | | |
| | | | | | | |
| <400> 1186 | | | | gaaatttgtg | gtaattatgt | 60 |
| ccacgcgtcc go | eggaegegt | gggtttttcg | aaaatatyca | agtaccagat | cactattata | 120 |
| atttgtgtct tg | gtgacaatt | atgttttata | gacctacact | atratricaa | attagtcaca | 180 |
| agatgttaaa at | tctcaagaa | ttagagagtt | ctccacatat | ttggcttcaa | aggagtacct | 240 |
| ttaagctata gt | tagaaggaa | gtaagtagat | traattttac | tttaaatgca | ttttactaca | 300 |
| aagcacaatt ca | egetitaty | graagracar | cttggattca | atccaaggtg | ctttagctat | 360 |
| cagtagtacc as | accigiaac | tttacaaggc | ttcctataat | attgactctg | agaataacac | 420 |
| atagtgaaga to | aayyacccc | tttaaaattq | ttcacagcca | atttaagaag | acccctcatg | 480 |
| aagtctcagt t | ttcactaca | gracatcatt | cctcctcact | aggagcactt | tgatgtaaac | 540 |
| cagaatagct t | taaaaanac | aaaaaggatc | gtagatctga | tttttaaatg | gttggttgct | 600 |
| ctgacagatc to | gaacacttt | gcttcatgac | tatttcgtca | taaaggtata | tgtttaaaat | 660 |
| ctgaatggca g | tactagete | tatactttta | atactgcttt | gtattttata | tgtaaagtag | 720 |
| tattgctgac at | ttttaaaaa | aatacaaaat | acaaaagaaa | ccattagaaa | ttaataactg | 780 |
| togetettee as | gttgaaata | ggaattggag | agaaaggatt | agaatatttt | aattagggga | 840 |
| gragattatt g | tccaaaggc | ttttatttag | agaaacgggt | aattaaaaca | gcagctttag | 900 |
| aatagettet ta | actgaatat | gcaaaagaat | aattccttgt | tatttcctaa | ttgatccaag | 960 |
| totoataaat ti | tagcttttg | tcataattcc | ttaccgaaaa | caactgaaat | tgagagicai | 1020 |
| aaatactgtg g | attagaata | aaaaccagtt | gccaaagcaa | cactctactt | agaagcacat | 1080 |
| gtacatacat g | gacctcatt | cagaagtcca | tgttgtagca | gttagaattt | gagtatcagc | 1140 |
| catttcattq t | agtaacaaa | aattgaattg | cattttgtgc | tcagttgttt | attgtaattt | 1200 |
| tatititigit a | cattaatat | tagttaagat | atggtcactt | gaattttttg | tatttaagaa | 1260 |
| ttttctattt t | aatgcatgt | tatactttta | tgtaggattc | caaaccttcc | ctctaaatgg | 1320 |
| gatttaaccc a | catctgcga | gatcagcgtt | atgctaagag | gaaatcactg | aggccatatc | 1380 |
| titttacaat c | tgaaaaaaa | agtagtaaaa | aggtagttaa | aaaaaaaaaa | ggccgggrgg | 1440 1500 |
| tggctcatac c | tgtaatcct | agcactttgg | gaggccaagg | caggcagatc | acttgaggtc | 1560 |
| aggggttcaa a | accagcctg | gccaagatgg | tgaaacccca | tetetgetaa | adatacaaaa | 1620 |
| aaaaattagc c | gggcatggt | ggcacgtgcc | tgtaatccca | getaettggg | caccattaca | 1680 |
| aggagaattg c | ttgaacccg | ggaggcggag | tatassassa | acaaaactac | tttcattaat | 1740 |
| ctccagcctg a | igcaacagag | taattaatt | taaattaata | acadadcedc | ctaatggaaa | 1800 |
| gtttgggtat g | tattttagt | tacttaattt | tattttcaat | agagattatt | tttccctcac | 1860 |
| cctatttgtg a | atettaggt | ttaaagtaag | acaatggagt | aagtaagagg | gtagatccaa | 1920 |
| acacagtatg t | atalalaa -ataaattat | accactctac | taactactta | gaatacacca | aacctggaag | 1980 |
| acacagtaty t | rantaaaatc | ccagtctgc | actatcaaaa | ttgccacagt | cacttttact | 2040 |
| acttgtgttc a | stantanact | cagcacttct | ttttcactqq | acctagtata | actgagaaat | 2100 |
| aaataactgt g | rtgcaaaata | ttggtatcat | taaggaccca | gagetgeeca | ttttctcttt | 2160 |
| ggtctaatag g | gaagcaatt | actgatagaa | atgtgagatt | aaaaataggg | tcctccctgc | 2220 |
| tactccaaac a | aatgcctaa | acacagtatg | tatctcagtc | : ctctgttccc | agagattcca | 2280 |
| ccctagccca c | rgaaagaact | aacctatata | agcaaaaccc | : aagtcatccc | cctccagaaa | 2340 |
| tttctctaac a | agccaagcct | gaccctaagg | ı gttccacttt | : gctttaaaag | ctaggagtgg | 2400 |
| cctctagage c | caggaacaca | ttaatacaac | : agttcaacct | : cagcaccaag | tcaggtacga | 2460 |
| aggggttgat a | acatagaatt | tttctctata | ı tcaagtttaa | ı atttctggaa | atagactttg | 2520 |
| attactaata a | acaattacaq | ttataccata | ı gtctgtaatt | : tgagaaaagg | tgaaatgtat | 2580 |
| ttaatatata t | tttagtttta | . ataaaaagat | : aaaattatta | ı cagaaataat | tgagagagag | 2640 |
| aaaatctatt a | ataatttatt | tgaaaaataa | a aacattttat | : ccagtaaaaa | aaaaaaaaaa | 2700 |
| aa | | | | | | 2702 |
| | | | | | | |
| <210> 1187 | | | | | | |
| <211> 1785 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo s | sabrens | | | | | |

```
<220>
<221> SITE
<222> (936)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1004)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1730)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1750)
<223> n equals a,t,g, or c
<400> 1187
ggcagtatga ctatagggag gctggtacgc ctgcaggtac cggtccggaa ttcccgggtc
                                                                      60
gacccacgcg tccgaaaaaa aaaaaaaaaa gagcagagaa aatgataaac aacttgcagg
                                                                     120
ttgttgtgtg gtataatggt cattcattat tttctactct ttctggtaaa gagttggtgt
                                                                     180
gtcatggaaa gtacctgttc tatgtgtgtg tgtctgtgtg tataattcgg tgtgaaaatt
                                                                     240
                                                                     300
aaagagaaaa aaacaataaa aaaccctttc ctatacttat gtgtaaatta ccatggtgtg
ctgcaaaaaa catatgtcaa ggtgatagaa ttattttgac tttcctgtac agttataaaa
                                                                     360
tgactcagtg agtttggtta gatatcctcg ttctttgaat ctatatcctt gtctgcttat
                                                                     420
gatgaaaaaa aagaaaaaaa aataatggcg agggtcttcc aaactctaaa gaatatgtca
                                                                     480
actatgatac aagtagcagt tagccttata actaactgta aacactgtct gtgggtttta
                                                                     540
agttttacct gagcattgga tattaacaga ccattagccc aactttcaaa aatatgaacc
                                                                     600
                                                                     660
720
aaatcaaacg gtggctgatg cgcccaaatt ctggcctcat cctctaactg gaggacatct
ggcaggacag caactgggct gtgccttttt tcagtccagc aacatcttcc actcaaccca
                                                                     780
cgccatttgg cagtttcccc attgcccctg gcacctagcc ctccggtacc gggaactaaa
                                                                     840
tatctttgam catcccgccc gcggggtctg cctacttaac ctgaggcagg tgaaagagcc
                                                                     900
                                                                     960
tcacgcaggg ttaggaactc cgggggsgtg gcgtancgta acgcartgtt ggggaaactt
gcggstgtgg attgggggac cggaaaggga ggggtgggcc scangcgccg gacgtgacgt
                                                                    1020
aagccggaag cgactttccg ccgagaaata aggggcgcgt gtttggaaat tgatagaaaa
                                                                    1080
gataaaggga ccgagctgct gtcagcctgg cttactgatc tgcgtccgtt tcaccacgga
                                                                    1140
ttcagttact aagcattttt ttcttttttt ggttctttgc aacgtgagtg gcattggctc
                                                                    1200
agtgatttcc atgagcatct ctaccagaaa acattgcctc gatgaggtgt ggtggaagcc
                                                                    1260
cggcagcccc ttctaatcgg ctaggcttga gaaagcgtgt acctctgcat ttccgaaatt
                                                                    1320
aactcagcgt gatcggcaag attttcctca gcatctggtg tcaagacact cgtcactatt
                                                                    1380
aattcggaaa raaaaaaaaa aacaaaacac cgttttccag catttctctt ggtggagaac
                                                                    1440
 taaacaacag gaaaaatgtc tattttccct aagatatctt tgagacctga ggttgaaaac
                                                                    1500
                                                                    1560
 tatcttaagg aaggctttat gaataaggag attgtgactg ctttaggtaa acaagaagca
 gaaaggaagt ttgaaacttt gttaaagcac ctgtcacatc ctccatcatt tacaactgtc
                                                                    1620
 agagtgaata cacatttagc ctcagtacaa catgtgaaaa atctgtttac ttgatggaac
                                                                    1680
 tttcagaagt ttaatgggtt aagggttccc attttttcaa catccagacn tcaagatggg
                                                                    1740
                                                                    1785
 ttacctattn cccgttattt gggccccgaa gggtttttaa aacca
 <210> 1188
 <211> 1162
 <212> DNA
 <213> Homo sapiens
 <400> 1188
 ccacgcgtcc gcccacgcgt ccggtgagaa gctagctgag agaatgctag cagtgttcct
                                                                      60
 toggatcaag ttgagactag otggtacagt taagootaag tttotttttg tttotttoct
                                                                     120
```

| tgcaagccta gaagtatatg atatggggaa aaacattaaa ctaaagctgg taaatcttgc atacatcatc tgtggtgttg acacctcttg ggactggagc aggtcatcca atgaaaaaca tttgggagac catggtaaaa | attcaaagct actgtatgcc actgaggcat aaaaaaaatt tcttgagctg tttctgaaac agttctcca gctgatcttg gggcacgcta cagccctagg ggaactcact ataaggaaaa agaggtggga cccatctct | actttgagaa tttggggaat ttataggaat gggagggtta agagaaagac tttcacgtgt tcgttcatca tgtgccacgt gtattgatca aaatgacata aatatgtgtt ttggaaagca tttgcccgg ggatcacttg acaaaaaata | gagttgtttt agaaggcagc cttaatgaag gtcattattt tagtgctggc ggcatttcct cactgctgac gttgtgaaag tcgtggggt ttaaataagt ttgtactaga tgctgtggct agcccaggag caaaaaatta | gttgtgcaaa agatagtata tccctgatct gaaaatagag aggaggtaac gagtggatgt acgtccttag tggaagaggc ccctggacaa cttttaggtg catgaaatag catgcctgta tcgagacca accaagcgtg | agacaaatag gctattttcc ctcaagaggc gtgagccctc caggacggcc gagtactgag aaatgtctga atgagaagag ctttttatta attctgacgt gagtggctgg atcccagcac gcctgggcaa gtggaggca | 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 |
|--|--|---|--|---|---|--|
| aggctgcaat | cagctgctcg gaattatgat aaaaaaaaaa | ggaggttgag ggcaccactg aa | gtgggaggat cactccaacc | taggtgacag | agateetgae | 1080 1140 1162 |
| <210> 1189 <211> 1024 <212> DNA <213> Homo | sapiens | | | | | |
| ccaacaggtg ttctggaaac aaatgttta tgctttccat tgccattatg aagcattcct aaggagagg ggatggagga gtttatcaa gacatccaag tccaggaact gcagctcaat gcacaaactg ttttcttc tggacacttg ggcttgactc aaaa <210> 1190 <211> 2191 <212> DNA | gtactttatg caaaatggag cctggggaat ctctgtgtgg ggactccgaa ctcttgctgg gaacttgtgt atttctagga cttagtaaca cactaaaccc tgtgctatgc ccacaaatca gtgatcaacc ctgtgttacc ggaaaggaaa | acttccattt ctagaaccca gaaatgatga tttatatac atgaccatgt atatactcaa tacatgatat tcaagtgtgt cagtgcaatt tgcttccca ttatagatctg agatacatgt cctaacttaa tgtgaatatt ccttgattata caatccttaa | gcgcaggagt taagactaag acggcattct gaaatcggga agtttgctgt gtcagaggaa caaaggtttc tctagtacca gatcttccga acatgctggc tcaagcaaaa gtgtgaaacc acacttaaag agtaatctaa tttacatgga | aaattgaaag aatgctgaga aatctctcag aacatcactg acccatgaca atgactatac atgatggaaa cagagtattt gtatcatcaa agaagatgat gatgcccaga attccaaaaa tctctttatg aacttttat ggcatttgac | aatcacttga ggaactattt aaatccatgt ctcgtgatcc tcacaacaat cctggtgctt tggcttcatg ctgaagaaat cactcactct tgttaaactc aagagaactt tttatatact aatttctctt ttatcacaca ttttcaaga | 60 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 |
| gaagttgtcc tcacttgatt aactatttaa atccatgttg cgtgatcctg acaacaataa tggtgcttaa gcttcatggg | cccacgcggt aacaggtggt ctggaaacca atgttttacc ctttccatct ccattatggg gcattcctct ggagagcgga atggaggaat | actttatgct aaatggagga tggggaattt ctgtgtggat actccgaaat cttgctggta acttgtgttc ttctaggaca | agaacccago aatgatgata tatattacao gaccatgtga atactcaaag catgatatgt aagtgtgtca gtgcaattto | gcaggagtaa agactaagaa ggcattctaa aatcgggaaa tttgctgtac cagaggaaat aaggtttcat tagtaccaca | agagcaatta attgaaagaa tgctgagagg tctctcagaa catcactgct ccatgacatc gactataccc gatggaaatg gagtatttct atcatcaaca aagatgattg | 60 120 180 240 300 360 420 480 540 600 |

```
720
ttaaactctc caggaacttg tgctatgctg ggaatctgtc aagcaaaaga tgcccagaaa
                                                                      780
gagaacttgc agctcaatcc acaaatcaag atacatgtgt gtgaaaccat tccaaaaatt
                                                                      840
tatatactgc acaaactggt gatcaacccc taacttaaac acttaaagtc tctttatgaa
                                                                      900
tttctctttt tttcttctct gtgttacctg tgaatattag taatctaaaa ctttttattt
atcacacatg gacacttggg aaaggaaact tgattatatt tacatggagg catttgactt
                                                                      960
tttcaagagg cttgactcgt ctcaggtgca atccttaatt aaacatacaa acaaaatttt
                                                                     1020
ccttttactt tctttgccaa aacaaaatgt aaaagcactg aaatatacat tgcaagtaca
                                                                     1080
aatttcctgt gaaaatcttt ttatagaaac acmaatgtat aagacmaatg tgctkgtyct
                                                                     1140
                                                                     1200
tttaaattct cctgkttcag aatctctttt taatctactc ctaaggatgt acaagttaga
gtcagaagac gttttggatt ttttccctct ctctcatsct cccgctgtgc ccttgcactt
                                                                     1260
gcatattaat aacatttcat ggactgggaa atagtgttct tttttgcaag cttgatgtca
                                                                     1320
agttagtcta aaccagcacc tggcagtatt ttagtgctca tcaacattgt gacaatcaca
                                                                     1380
caaggaagat catttctaca tttctgtcct ccctgcgttc tcagcttgct taaccattcc
                                                                     1440
tctacctctt gcatttttt gcggataaat gtatccccat ttctgcttct ctgtttcccc
                                                                     1500
                                                                     1560
tccttttcca ttgtttttcc ttatggtact actttctcag gtgctacata tcatatatt
                                                                     1620
gtcccatcta taacatattt aaatgctata agtagtaact ccattaaaca aaggcattta
                                                                     1680
caaaagcaca caggtgttta gaaaagcaat agtttcatca attccaagtt atgtggatat
tgtaactggc cacaagaatg aaatggaggg catttggtgt cataagatgg catgtcttga
                                                                     1740
                                                                     1800
tgacaagaaa caaaacgccc ttcattaata tgcctcagtg taataactat tatagaaact
gttggcaagc agagtgcttt cctataacag aatgtgtctt aattttctac tcgagggaaa
                                                                     1860
                                                                     1920
ggtttgtcca ggtaacaaca ctaaagacaa ccctaagaac acccactcca gcagtatgtc
                                                                     1980
cattagacac taaaactctc caaattattt gtcagggagc ctggcgattc tgccaagaag
                                                                     2040
gcaggtgttt tgcccttaga gcctatacag ttctcttgga gaaattgtct ttcaggcacc
                                                                     2100
actgttaatc actgagactg attctaatgc aaagcaggga agacagaggt gacaaaggaa
                                                                     2160
gagttgggca gcagcattca acaaacatcc gtgaatgaaa ctttgctcct ccattccgat
                                                                     2191
atctgggctg cactgatctc gtgccgaatt c
<210> 1191
<211> 1103
<212> DNA
<213> Homo sapiens
<400> 1191
gcattgataa tattggtcct attaagtggt ggtgtagaga agtattcaca aatttcaaac
                                                                       60
caaaaaatta tgtgaatagt aggggaattc tttctgtacc cttgagttat tttatcactg
                                                                      120
                                                                      180
ttgtgwttac accttataag amaattccac tctgagaatg agcacaagga acagatagga
aatgtgcagc tggtgctgat gtgtagccct gcgcccttca aatccatgtg tgcaggcagt
                                                                      240
cacttectea gteattaget ttteatetga aacaacaaag etagtggtag geagettetg
                                                                      300
agatggttcc cagtgaagcc tgcccgctgg tgtgcactct tgtttaacct cctgtccttg
                                                                      360
ggtgtgagct gcacttagta acctgcttct aaggagtaga acatggggga agggagagag
                                                                      420
cacacctgag gtttggtggc agaaaggctc tggcttctgt ctcctcgccc actcttaact
                                                                      480
ttcatgcttt cctgctcaga aggtgaggtg ttctttggaa aggcccatgt gacaagaagc
                                                                       540
agaactttcc agccgacagc tamcatggaa ctgaggccct cattccaacg gcctccaact
                                                                       600
gaatcctgcc aacaagacat gagtttggaa ggggatccac cccagtggaa ctcctgagat
                                                                       660
gattgcagcc ttgtgagaga caaaccaaga tgtttgttta agtgctaaac gtggggataa
                                                                      720
tttttatgca gttacagata actaatacaa agctagaaaa agaaaaaggc ataatacaaa
                                                                       780
tttcagcatc ttaatgagtc tgccagcatc tgaagaactg aaataaggcg aactggtctt
                                                                       840
cctcccgcat gagcacctgt cagctatctt agtcttacct taaataaaaa cacttaacca
                                                                       900
aatacattat ctctctcaag gacagcaaaa gatattgaaa tttgatgatt ctgtatttga
                                                                       960
aatgtaaatc agattacaat taaactctaa ctcttgaata ctgtcccttt taagtcacca
                                                                      1020
aatctccttt gagtaagatg aaattatcta aaaatgaata aaggataaaa tttttaaaaa
                                                                      1080
                                                                      1103
aaaaaaaaa aaagggcggc cgc
<210> 1192
<211> 1658
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (778)
```

<223> n equals a,t,g, or c

| <pre><400> 1192 ggtccggaat tcccgggtcg acccacgcgt ccgagcacgt cat</pre> | agccacc atacggagaa 60 |
|---|--|
| gagtccagtt cetttteect gggaaceece aacecacact ett | catcagg caggtccct 120 |
| ggctcatgaa tgcagaacaa tcaccgcacc catggctgag cgt | acceact ggtagtggcc 180 |
| tggagtttcc ctagggagag gctccaagag gcatatggct gtc | cctctgc cactgccaca 240 |
| gcaacagttc tatccctact tccctcagcc tggggaagaa aca | aagagcc tgaggcctat 300 |
| accaagttta cagcacacca cagtcaccat gtggagaaga gac | caatctc tcctcctagt 360 |
| gagcetteaa etgeettttt eeceagtaag tggaaceeca ege | ttcatgc cagcagtgca 420 |
| gccatgccaa ccccacagac tgaacactcc cagtaatagc tgc | totgtgt ttottggggg 480 |
| tggagcccc aggggcaact aaaagcctgt ctgccattgc ctc | tgatgtg gtactacccc 540 |
| tactactctc agactaacaa aggagcaaga aaataaatgc ctt | atccaca cttccaacaa 600 |
| gctgcagtca acccaaggag acgaggccag tctgtgtccc atg | ggtcctg cccatccccc 660 |
| ctgctcatca ccaagcaggg aacccacaac ttgggcacag agc | acacact ctctatcctt 720 |
| ggctgattgc actgtgaaat tgctgacctg catctctctg ggg | tggagcc cccagganac 780 |
| aagcaaaagc ccttggccac aaccattact aaggtccctt tct | ctgtcct acttagggag 840 |
| gaaacataaa ccatgagatc acctcaaagc tgtagtgggc arc | ctgggag tgctaaactg 900 |
| caatgtacag ccaacattca tgtgggagar gagcctacac ttt | gagagct ttgacaggga 960 |
| gcatggttgc aactgtgagg aaatataggg gagccacaag aac | ttaccag ctgaccacta 1020 |
| cacctaagtg tcacctacag gataacattc gaaagcttca aca | ccaaaaa tatcttactg 1080 |
| acatacaccc ctgcgaaacc aaagatgaga agtcagctac aaa | taaaggc ctgcacgaag 1140 |
| ccatggcctt gtgaaaacat ccagaaaata agtctattga aag | taaacaa tttacactgt 1200 |
| agttaaagga acacctaaac mcagaagtga gaaagaatga atg | ccagaat tccagtamct 1260 |
| caaatgamcg gagtgtctta tgtccttcaa acgaccacac tag | atotoca acaagggtto 1320 |
| ttaaccaggc tgaattggct gaaatgacag aaatggaatt cag | uucucgu couggenege |
| agatcattga gattcaggag aatggcaaaa cccaattcar gga | |
| aaataataca ggatctgaca tatggaatag ccggtataaa aaa | 9 |
| tagagetgaa aaacacatta caagaattte acaatgeaat tgo | -555 |
| tagaccaagc tgaggaaaga aactcagaaa ttgaagactg gct | 1658 |
| cagacaaaaa taaagaaaaa aaaaaaaaaa gggcggcc | 1000 |
| | |
| -210> 1103 | |
| <210> 1193 | |
| <211> 1167 | |
| <211> 1167 <212> DNA | |
| <211> 1167 | |
| <211> 1167 <212> DNA <213> Homo sapiens <400> 1193 | |
| <211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacqcqtcc qcqqacqcqt ggggtcccqc cccctctcc tcq | rctgctta ggctccgcgg 60 |
| <211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacgcgtcc gcggacgcgt ggggtcccgc cccctctcc tcgcctccaagct gtagctatga cggcgcggg gactccgagc cgc | ttcttgg ccagcgttct 120 |
| <211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacgcgtcc gcggacgcgt ggggtcccgc ccccctctcc tcgcctccaagct gtagctatga cggcgcggg gactccgagc cgcccacaacgga ctgggtcgct atgtgcagca gctgcagcgt ctg | ettettgg ceagegttet 120 gagettea gegteaaceg 180 |
| <211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacgcgtcc gcggacgcgt ggggtcccgc cccctctcc tcccctccaagct gtagctatga cggcgcggg gactccgagc ccacaacgga ctgggtcgct atgtgcagca gctgcagcgt ccacacggc tcgtctcgcg gcgccaggga gttcgtggag cggcaggga gttcgtggag cggccaggga gttcgtggag cgg | ragettea gegteaaceg 180 gaggtga tegaettege 240 |
| <211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacgcgtcc gcggacgcgt ggggtcccgc cccctctcc tcgcctccaagct gtagctatga cggcgcgcgg gactccgagc cgccacaacgga ctgggtcgct atgtgcagca gctgcagcgt ctgcgacggcgc tcgtctcgcg gcgccaggga gttcgtggag cggccgacggaat ccaggggtcg taatatatgt aaactcgcgt ccg | rettettgg ceagegitet 120 ragettea gegieaaceg 180 rgaggiga tegaeitege 240 rigetgeg tgeecagagi 300 |
| <211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacgcgtcc gcggacgcgt ggggtcccgc cccctctcc tcgcctccaagct gtagctatga cggcgcgcgg gactccgagc cgccacaacgga ctgggtcgct atgtgcagca gctgcagcgt cgacgggcgc tcgtctcgcg gcgccaggga gttcgtggag cggccgagggat ccagagggat ccaggggtcg taatatatgt aaactcgcgt ccagtggcgaa taccgtgagt ggggccgggc tcggctgga ggg | rettettgg ceagegitet 120 ragettea gegiteaaceg 180 rgaggitga tegaettege 240 ritgetgeg tgeecagagit 300 regggate aggggetega 360 |
| <211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacgcgtcc gcggacgcgt ggggtcccgc ccccctctcc tcgcctccaagct gtagctatga cggcgcgcgg gactccgagc cgccacaacgga ctgggtcgct atgtgcagca gctgcagcgt ctgacggcgc tcgtctcgcg gcgccaggga gttcgtggag cgccgacggaat ccaggggtcg taatatatgt aaactcgcgt ccgatggccgaa taccgtgagt ggggccgggc tcggctgtatcc tccttctcgc ttggtcgcac cggccagctt cca | rettettgg ceagegitet 120 ragettea gegiteaaceg 180 ragaggiga tegaettege 240 ritgetgeg tgeecagagit 300 regggate aggggetega 360 receacte teacecetet 420 |
| <211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacgcgtcc gcggacgcgt ggggtcccgc cccctctcc tcgcctccaagct gtagctatga cggcgcggg gactccgagc cgccacaacgga ctgggtcgct atgtgcagca gctgcagcgt ctgacggggcc tcgtctcgcg gcgccaggga gttcgtggag cggccgaggat ccagacggat ccaggggtcg taatatatgt aaactcgcgt ccgctatcc tccttctcgc ttggtcgcac cggccagctt ccattctcgc ttggtcgcac cggccagctt ccattctccac tccttctcgc ttggtcgcac cggccagctt ccattctccac tccttctcgc ttggtcgcac gagcatccac tggccagtt aacggggctg tgggcgagga gagcatccac tggccagctt ccattctccac tccttctcac ttggtcgcagaga gagcatccac tggccagctt ccattctccac tccttctccac tggccgagga gagcatccac tggccagctt tggccagtt aacggggctg tgcgcgagga gagcatccac tggccagctt ccattctcacac tgccacac tggccagctt ccacacacac tggccagctt tccacacacacac tggccagctt tccacacacacacacacacacacacacacacacaca | rettettgg ceagegitet 120 ragettea gegiteaaceg 180 ragaggiga tegaettege 240 ritgetgeg tgeecagagit 300 regggate aggggetega 360 receate teacecetet 420 raagtegg tegaggagat 480 |
| <pre><211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacgcgtcc gcggacgcgt ggggtcccgc cccctctcc tcg cctccaagct gtagctatga cggcgcgcgg gactccgagc cgc ccacaacgga ctgggtcgct atgtgcagca gctgcagcgt ctg cgacggcgc tcgtctcgcg gcgccaggga gttcgtggag cgc cgacgggat ccaggggtcg taatatatgt aaactcgcgt ccg agtggccgaa taccgtgagt ggggccgggc tcggctgga ggc ccgctatcc tccttctcgc ttggtcgcac cggccagctt cca tctgccagtt aacggggctg tgcgcagca gagcatccac tgc ctcgacgctg gtgcagaagc tggccgacca gtcgggcttg gagc ctcgacgctg gtgcagaagc tggccgacca gtcgggcttg gagcatccac tgcc ctcgacgctg gtgcagaagc tggccgacca gtcgggcttg gagcatccac tgcc ctcgacgctg gtgcagaagc tggccgacca gtcgggcttg gagcaccac tgcc ctcgacgctg gtgcagaagc tggccgacca gtcgggcttg gagcaccac tgccacgctg gtcgacagctt ccacacacgct gtcgacgaccac gtcgggcttg gagcaccac gaccacac tgccacacac tgccacacacacacacacacacacacacacacacacacac</pre> | rettettgg ceagegitet 120 ragettea gegiteaaceg 180 ragaggiga tegaettege 240 ritgetgeg tgeecagagit 300 regggate aggggetega 360 receate teacecetet 420 raagtegg tegaggagat 480 regtgatee geateegeaa 540 |
| <pre><211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacgcgtcc gcggacgcgt ggggtcccgc cccctctcc tcg cctccaagct gtagctatga cggcgcgcgg gactccgagc cgc ccacaacgga ctgggtcgct atgtgcagca gctgcagcgt ctg cgacggcgc tcgtctcgcg gcgccaggga gttcgtggag cgc cgacggaat ccaggggtcg taatatatgt aaactcgcgt ccg agtggccgaa taccgtgagt ggggccgggc tcgggctgga ggcccgctatcc tccttctcgc ttggtcgcac cggccagctt ccg tctgccagtt aacggggctg tgcgcgaga gagcatccac tgc ctcgacgctg gtgcagaagc tggccgacca gtcgggcttg gag gccttccac accgacaacc ctagcatcca gggccagtgg cac </pre> | rettettgg ceagegttet 120 ragettea gegteaaceg 180 ragaggtga tegaettege 240 rtgetgeg tgeceagagt 300 regggate aggggetega 360 receate teacecetet 420 raagtegg tegaggagat 480 regtgatee geateegeaa 540 recettea ceaacaagee 600 |
| <pre><211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacgcgtcc gcggacgcgt ggggtcccgc cccctctcc tcg cctccaagct gtagctatga cggcgcgcgg gactccgagc cgg ccacaacgga ctgggtcgct atgtgcagca gctgcagcgt ctg cgacggcgc tcgtctcgcg gcgccaggga gttcgtggag cgg ccgacggaat ccaggggtcg taatatatgt aaactcgcgt ccg agtggccgaa taccgtgagt ggggccgggc tcgggctgga ggg cccgctatcc tccttctcgc ttggtcgcac cggccagctt cca tctgccagtt aacggggctg tgcgcgaga gagcatccac tgc ctcgacgctg gtgcagaagc tggccgacca gtcgggcttg gag gccttccac accgacaacc ctagcatcca gggccagtgg cac gaccacqttc cgcgggctac gcccccgaga ggttcaggat ccc gaccacqttc cgcgggctac gcccccgaga ggttcaggat ccc gaccacqttc cgcgggctac gcccccgaga ggttcaggat ccc gaccacqttc cgcgggctac gcccccgaga ggttcaggat ccc</pre> | rettettgg ceagegttet 120 ragettea gegteaaceg 180 ragaggtga tegaettege 240 rtgetgeg tgeceagagt 300 regggate aggggetega 360 receate teaceetet 420 raagtegg tegaggagat 480 regtgatee geateegeaa 540 recettea ceaacaagee 600 regeeeeag eecaggtaca 660 |
| <pre><211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacgcgtcc gcggacgcgt ggggtcccgc cccctctcc tcg cctccaagct gtagctatga cggcgcgcgg gactccgagc cgc ccacaacgga ctgggtcgct atgtgcagca gctgcagcgt ctg cgacggcgc tcgtctcgcg gcgccaggga gttcgtggag cgg ccgacggaat ccaggggtcg taatatatgt aaactcgcgt ccg agtggccgaa taccgtgagt ggggccgggc tcgggctgga ggg cccgctatcc tccttctcgc ttggtcgcac cggccagctt cca tctgccagtt aacggggctg tgcgcgaga gagcatccac tgc ctcgacgctg gtgcagaagc tggccgacca gtcgggcttg gag gccttccac accgacaacc ctagcatcca gggccagtgg cac gaccacgttc cgcgggctac gcccccgaga ggttcaggat cct agcacagtga agagttgccc caccaactgc agccccaggc ttt</pre> | rettettgg ceagegttet 120 ragettea gegteaaceg 180 ragaggtga tegaettege 240 rtgetgeg tgeecagagt 300 regggate aggggetega 360 receate teacecetet 420 ragtgategg tegaggagat 480 regtgatee geateegeaa 540 recettea ceaacaagee 600 regeeceag eceaggtaca 660 reggaetgt tacteeggta 720 |
| <pre><211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacgcgtcc gcggacgcgt ggggtcccgc ccccctctcc tcg cctccaagct gtagctatga cggcgcggg gactccgagc cgc ccacaacgga ctgggtcgct atgtgcagca gctgcagcgt ctg cgacggcgc tcgtctcgcg gcgccaggga gttcgtggag cgg ccgacggaat ccaggggtcg taatatatgt aaactcgcgt ccg agtggccgaa taccgtgagt ggggccgggc tcgggctgga ggg cccgctatcc tccttctcgc ttggtcgcac cggccagctt cca tctgccagtt aacggggctg tgcgcgagga gagcatccac tgg ctcgacgctg gtgcagaagc tggccgagca gtcgggcttg gag gcccttccac accgacaacc ctagcatcca gggccagtgg cac gaccacgttc cgcgggctac gcccccgaga ggttcaggat cct aggacagtga agagttgcc caccaactgc agccccaggc ttt aaggtqgttc ttcccctttg ggattccaag cccaggcaaa tgg</pre> | rettettgg ceagegttet 120 ragettea gegteaaceg 180 ragaggtga tegaettege 240 regeggate aggggetega 360 receate teacecetet 420 ragtgateg tegaggagat 480 regeggate geateegeaa 540 recettea ceaacaagee 600 regeceag cecaggtaca 660 regecett tacteeggta 720 regaeceat caatgggeaa 780 |
| <pre><211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacgcgtcc gcggacgcgt ggggtcccgc ccccctctcc tcgccacaacgga ctgggtcgct atgtgcagca gctgcagcgt cgacggggcgcccacaacgga ctggtcgct atgtgcagca gctgcagcgt ccgacgggat ccacaacgga ccaggggtcg taatatatgt aaactcgcgt ccgacggaat ccaggggtcg taatatatgt aaactcgcgt ccgacggaat taccgtgagt ggggccgggc tcgggctgga ggcccctccacactgc tcctctcgc ttggtcgcac cggccagctt ccacacgct tctgccagtt aacggggctg tgcgcagga gagcatccac tgcccagctt ccacacgct gtgcagaagc tggccgagca ggccattcac tcctccac accgacaacc ctagcatca gggccagtgg cacacgttc cgcgggctac gcccccaactgc agagttgccc caccaactgc agaccacgtc ttcccctttg ggattccaag ggttcaggat ccacaggctacactgc ttcccctttg ggattccaag cccaggcaaa tggctgacaag ttctgcttqg gataatgaag aactgcctgt ttccctttt</pre> | rettettgg ceagegttet 120 ragettea gegteaaceg 180 ragaggtga tegaettege 240 regeggate aggggetega 360 receate teacecetet 420 ragategg tegaggagat 480 regeggate geateegeaa 540 recettea ceaacaagee 600 regeceag cecaggtaca 660 regecette tacteegta 720 regaeceat caatgggeaa 780 rettteeag tgeetgette 840 |
| <pre><211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacgcgtcc gcggacgcgt ggggtcccgc cccctctcc tcg cctccaagct gtagctatga cggcgcggg gactccgagc cgg ccacaacgga ctgggtcgct atgtgcagca gctgcagcgt ctg cgacggcgc tcgtctcgcg gcgccaggga gttcgtggag cgg ccgacggaat ccaggggtcg taatatatgt aaactcgcgt ccg agtggccgaa taccgtgagt ggggccgggc tcgggctgga ggg cccgctatcc tccttctcgc ttggtcgcac cggccagctt cca tctgccagtt aacggggctg tgcgcgaga gagcatccac tgg ctcgacgctg gtgcagaagc tggccgagca gtcgggcttg gag gcccttccac accgacaacc ctagcatca gggccagttg cac gaccacgttc cgcgggctac gccccgaga ggttcaggat cct aggacagtga agagttgcc caccaactgc agccccaggc ttg gttgacagag ttctgcttgg gataatgaag aactgcctgt ttc tgggggcagt gaccttgtga accactcatt tttatgcaag tgg</pre> | rettettgg ceagegttet 120 ragettea gegteaaceg 180 ragaggtga tegaettege 240 regeggate aggggetega 360 receate teacecetet 420 ragtgateg tegaggagat 480 regeggate geateegeaa 540 recettea ceaacaagee 600 regeceag cecaggtaca 660 regaetgt tacteeggta 720 ragaaceat caatgggeaa 780 retteeag tgeetgette 840 recetteag tgeetgette 840 |
| <pre><211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacgcgtcc gcggacgcgt ggggtcccgc ccccctctcc tcg cctccaagct gtagctatga cggcgcggg gactccgagc cgg ccacaacgga ctgggtcgct atgtgcagca gctgcagcgt ctg cgacggcgc tcgtctcgcg gcgccaggga gttcgtggag cgg ccgacggaat ccaggggtcg taatatatgt aaactcgcgt ccg agtggccgaa taccgtgagt ggggccgggc tcgggctgag cccgctatcc tccttctcgc ttggtcgcac cggccagctt cca tctgccagtt aacggggctg tgcgcgaga gagcatccac tg ctcgacgctg gtgcagaagc tggccgagca gtcgggcttg gag gccttccac accgacaacc ctagcatca gggccagttg cac gaccacgttc cgcgggctac gcccccgaga ggttcaggat cct aaggtggttc ttcccctttg ggattccaag ggttcaggat cct gggggcagt gaccttgtga accactcatt tttatgcaag tg atgaggaaga cttcaagggt tttacagggc ccttgttttt taa atgaggaaga cttcaagggt tttacagggc ccttgttttt taa</pre> | rettettgg ceagegttet 120 ragettea gegteaaceg 180 ragaggtga tegaettege 240 regeggate aggggetega 360 receate teacecetet 420 ragtgategg tegaggagat 480 regeggate geateegeaa 540 recettea ceaacaagee 600 regeceag cecaggtaca 660 regaetgt tacteeggta 720 regaaceat caatgggeaa 780 retteeag tgeetgette 840 recetteag tgeetgette 840 reatecea tgataataa 960 |
| <pre><211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacgcgtcc gcggacgcgt ggggtcccgc cccctctcc tcgcctccaagct gtagctatga cggcgcgcgg gactccgagc cgccacaacgga ctgggtcgct atgtgcagca gctgcagcgt ccgacgggcc tcgtctcgcg gcgccaggga gttcgtggag cggccgggat ccagacggtcg taatatatgt aaactcgcgt ccgacggaat ccaggggtcg taatatatgt aaactcgcgt ccgacggaat taccgtgagt ggggccgggc tcggcgagat ccggcaggt tcgggcggg tcggcagtgag gggccagtt ccattctcacattctctcgc ttggtcgcac cggccagctt ccattctcacattctctcgc ttggtcgcac ggccagctt ccattctcacattctctcgc ttggtcgcac ggccagctt ccattctcacattcacacattcacattcacattcacacattcacattcacacacacacacacacacacacacacacacacacacaca</pre> | rettettgg ceagegttet 120 ragettea gegteaaceg 180 ragaggtga tegaettege 240 rtgetgeg tgeecagagt 300 reeggate aggggetega 360 reecate teacecetet 420 ragategg tegaggagat 480 regtgatee geateegeaa 540 reecettea eeaacaagee 600 regeeceag eecaggtaca 660 regaetgt tacteeggta 720 ragaeceat caatgggeaa 780 retteeag tgeetgette 840 recatee aaaacetgag 900 rateeaaa ttgataataa 960 ragaateec tgatgtetta 1020 |
| <pre><211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacgcgtcc gcggacgcgt ggggtcccgc cccctctcc tcgcctccaagct gtagctatga cggcggcggg gactccgagc cgcccacaacgga ctgggtcgc atgtgcagca gctgcagcgt ctgcgacgggcc tcgtctcgcg gcgccaggga gttcgtggag cggccggggccgggat ccagagggtcg taatatatgt aaactcgcgt ccgacggaat ccaggggtcg taatatatgt aaactcgcgt ccgacggaat taccgtgagt ggggccgggc tcggcgagat tcgggcgggc tcggcaggat tcgggcgggc tcggcaggt tcgggcgggc ccgctatcc tccttctcgc ttggtcgcac cggccagctt ccatcgcagtt aacggggctg tgcgcgagga gagcatccac tggcccagctt ccatcgacgct gtgcagaagc tggccgacca gtcgggcttg gacgcccttccac accgacaacc ctagcatcca gggccagtgg cacgaccagttc agcacagtta agagttgcc caccaactgc agccccaggc tttgggggcagt gaccttttg ggattccaag ggttcaggat cctgggggttg ttcgcggggagt tctgccttg gacacacgtt ttcccctttg gattaatgaag aactgcctgt ttcgggggaaga cttcaagggt tttacagggc ccttgtttt taatgaaggaaga cttcaagggt tttacagggc ccttgtttt taatgaacaac cactgaacac cactgaagacccactct tttatgcaag ggttgatctaaa acacagtgag aggtctgaag gctggcttct gaattagaacaac cactgagcta cggagagctc tgctgtgatg ggcttctaagacac cactgagcata cggagagctc tgctgtgatg ggcttctatgatg ggttgaacaac cactgagcta cggagagctc tgctgtgatg ggcttgatg ggcttgaagacaccaccactcact tttatgcaag tggatctcaaa acacagtgag aggtctgaag gctggcttct gaattagaacaac cactgagcta cggagagctc tgctgtgatg ggcttgatgagaccaccactcact tgctgtgatg ggcttcaaaccaccaccaccaccaccaccaccaccaccacca</pre> | rettettgg ceagegttet 120 ragettea gegteaaceg 180 ragaggtga tegaettege 240 regaggate aggggetega 360 receate teacecetet 420 ragategg tegaggagat 480 regaggate geateegeaa 540 recettea ceaacaagee 600 regeceag cecaggtaca 660 regaetgt tacteeggta 720 regaeceat caatgggeaa 780 retteeag tgeetgette 840 recetteag tgeetgette 840 regaeteet aaaacetgag 900 reateceaa ttgataataa 960 regagatece tgatgtetta 1020 retaggeac tttatatetg 1080 |
| <pre><211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacgcgtcc gcggacgcgt ggggtcccgc cccctctcc tccccaagct gtagctatga cggcgcgcgg gactccgagc cgcccacaacgga ctgggtcgct atgtgcagca gctgcagcgt ccgacggcgc tcgtctcgcg gcgccaggga gttcgtggag cgcccacaacgga ccagggtcg taatatatgt aaactcgcgt ccgacggaat ccaggggtcg taatatatgt aaactcgcgt ccgacggaat taccgtgagt ggggccggg cccgctatcc tccttctcgc ttggtcgcac cggccagct tcgtctcgc ttggtcgcac ggccagct ccgacggt gtgcagaagc tggccgagca gagcatcac tgcccagtt aacggggctg tgcgcagaga gagcatcac tggcccagtt ggcccattccac accgacaacc ctagcatca gggccagttg gaccacgttc agcacagtta agagttgcc caccaactgc agcccaggt ttcccctttg ggattccaag ggttcaggat cctaaggtgat ttcccctttg ggattccaag ggttcaggat cctaaggtgat gaccttgta accactact tttatgcaag ttgggggagat accactact tttatgcaag tggggggagat accactactat tttatgcaag tggatccaaa accagtgag aggtctgaag gctggcttct gacttggaacaac cactgagcta cggagagctc tgctgtgatg ggcttggaataca gatttataaa acaggttaat aaacttatcc aaggttgaataca gatttataaa acaggttaat aaacttatcc aaggttaataaaca gatttataaa acaggttaat aaacttatcc aaggttaataa aaacttatcc aaggttaaactaacaactaactaactaactaactaactaa</pre> | rettettgg ceagegttet 120 ragettea gegteaaceg 180 ragaggtga tegaettege 240 regaggate aggggetega 360 receate teacecetet 420 ragategg tegaggagat 480 regaggate geateegeaa 540 recettea ceaacaagee 600 regeceag cecaggtaca 660 regaetgt tacteeggta 720 regaeceat caatgggeaa 780 retteeag tgeetgette 840 recetteag tgeetgette 840 regaeteet aaaacetgag 900 reateceaa ttgataataa 960 regagatece tgatgtetta 1020 retaggeac tttatatetg 1080 |
| <pre><211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacgcgtcc gcggacgcgt ggggtcccgc cccctctcc tcgcctccaagct gtagctatga cggcggcggg gactccgagc cgcccacaacgga ctgggtcgc atgtgcagca gctgcagcgt ctgcgacgggcc tcgtctcgcg gcgccaggga gttcgtggag cggccggggccgggat ccagagggtcg taatatatgt aaactcgcgt ccgacggaat ccaggggtcg taatatatgt aaactcgcgt ccgacggaat taccgtgagt ggggccgggc tcggcgagat tcgggcgggc tcggcaggat tcgggcgggc tcggcaggt tcgggcgggc ccgctatcc tccttctcgc ttggtcgcac cggccagctt ccatcgcagtt aacggggctg tgcgcgagga gagcatccac tggcccagctt ccatcgacgct gtgcagaagc tggccgacca gtcgggcttg gacgcccttccac accgacaacc ctagcatcca gggccagtgg cacgaccagttc agcacagtta agagttgcc caccaactgc agccccaggc tttgggggcagt gaccttttg ggattccaag ggttcaggat cctgggggttg ttcgcggggagt tctgccttg gacacacgtt ttcccctttg gattaatgaag aactgcctgt ttcgggggaaga cttcaagggt tttacagggc ccttgtttt taatgaaggaaga cttcaagggt tttacagggc ccttgtttt taatgaacaac cactgaacac cactgaagacccactct tttatgcaag ggttgatctaaa acacagtgag aggtctgaag gctggcttct gaattagaacaac cactgagcta cggagagctc tgctgtgatg ggcttctaagacac cactgagcata cggagagctc tgctgtgatg ggcttctatgatg ggttgaacaac cactgagcta cggagagctc tgctgtgatg ggcttgatg ggcttgaagacaccaccactcact tttatgcaag tggatctcaaa acacagtgag aggtctgaag gctggcttct gaattagaacaac cactgagcta cggagagctc tgctgtgatg ggcttgatgagaccaccactcact tgctgtgatg ggcttcaaaccaccaccaccaccaccaccaccaccaccacca</pre> | rettettgg ceagegttet 120 ragettea gegteaaceg 180 ragaggtga tegaettege 240 rtgetgeg tgeecagagt 300 reeggate aggggetega 360 reecate teacecetet 420 ragtgateg tegaggagat 480 regtgatee geateegeaa 540 reecettea eeaacaagee 600 regeecag eecaggtaca 660 regaetgt tacteeggta 720 ragaeceat eaatgggeaa 780 retteeag tgeetgette 840 reacetee aaaacetgag 900 rateeaaa tegataataa 960 ragaateee tgatgtetta 1020 rataggeae tttatatetg 1080 regteacaa aaaaaaaaaa 1140 |
| <pre><211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacgcgtcc gcggacgcgt ggggtcccgc cccctctcc tccccaagct gtagctatga cggcgcgcgg gactccgagc cgcccacaacgga ctgggtcgct atgtgcagca gctgcagcgt ccgacggcgc tcgtctcgcg gcgccaggga gttcgtggag cgcccacaacgga ccagggtcg taatatatgt aaactcgcgt ccgacggaat ccaggggtcg taatatatgt aaactcgcgt ccgacggaat taccgtgagt ggggccggg cccgctatcc tccttctcgc ttggtcgcac cggccagct tcgtctcgc ttggtcgcac ggccagct ccgacggt gtgcagaagc tggccgagca gagcatcac tgcccagtt aacggggctg tgcgcagaga gagcatcac tggcccagtt ggcccattccac accgacaacc ctagcatca gggccagttg gaccacgttc agcacagtta agagttgcc caccaactgc agcccaggt ttcccctttg ggattccaag ggttcaggat cctaaggtgat ttcccctttg ggattccaag ggttcaggat cctaaggtgat gaccttgta accactact tttatgcaag ttgggggagat accactact tttatgcaag tggggggagat accactactat tttatgcaag tggatccaaa accagtgag aggtctgaag gctggcttct gacttggaacaac cactgagcta cggagagctc tgctgtgatg ggcttggaataca gatttataaa acaggttaat aaacttatcc aaggttgaataca gatttataaa acaggttaat aaacttatcc aaggttaataaaca gatttataaa acaggttaat aaacttatcc aaggttaataa aaacttatcc aaggttaaactaacaactaactaactaactaactaactaa</pre> | rettettgg ceagegttet 120 ragettea gegteaaceg 180 ragaggtga tegaettege 240 rtgetgeg tgeecagagt 300 reeggate aggggetega 360 reecate teacecetet 420 ragtgateg tegaggagat 480 regtgatee geateegeaa 540 reecettea eeaacaagee 600 regeecag eecaggtaca 660 regaetgt tacteeggta 720 ragaeceat eaatgggeaa 780 retteeag tgeetgette 840 reacetee aaaacetgag 900 rateeaaa tegataataa 960 ragaateee tgatgtetta 1020 rataggeae tttatatetg 1080 regteacaa aaaaaaaaaa 1140 |
| <pre><211> 1167 <212> DNA <213> Homo sapiens <400> 1193 ccacgcgtcc gcggacgcgt ggggtcccgc ccccctctcc tcgccacaacgga ctgggtcgct atgtgcagca gctgcagcgt cgacggggcccacaacgga ctggtcgct atgtgcagca gctgcagcgt ccgacgggacccacaacgga ctaggtcgc taatatatgt aaactcgcgt ccgacggaat ccaggggtcg taatatatgt aaactcgcgt ccgacggaat ccaggggtcg taatatatgt aaactcgcgt ccgacggaat taccgtgagt ggggccgggc tcgggctgga gggcccggacaacccacgtc tctgccagt aacggggctg tgggcgaga gacaccacactcc tcctctcgc ttggccgaca gacgacacct tcctgacgctg gtgcagaagc tggccgacca gtcgggcttg gacgcccttccac accgacaacc ctagcatcca gggccagttg gaccacacgtc agcacacgtc agcacaaccc agcacaccc agcacactcac gggccagtga agagttcaacac ggccccagga aggttcaggat ccacacactgc agcacaactgc agcacaactgc agcacaactgc agcacaactgc agcacaactgc agcacaactgc agcacaactgc ttcacacactgc agcacaactgc ttcacacactgc accaactgc accaactgc ttcacacactgc accacactgc ttcacacactgc ttcacacactgc accacactact tttatgcaag tggggggacacacaccactgc accacactact tttatgcaag tggacctcacacactgcacactact tttatgcaag tggacctcacacacacacacacacacacacacacacacac</pre> | rettettgg ceagegttet 120 ragettea gegteaaceg 180 ragaggtga tegaettege 240 rtgetgeg tgeecagagt 300 reeggate aggggetega 360 reecate teacecetet 420 ragtgateg tegaggagat 480 regtgatee geateegeaa 540 reecettea eeaacaagee 600 regeecag eecaggtaca 660 regaetgt tacteeggta 720 ragaeceat eaatgggeaa 780 retteeag tgeetgette 840 reacetee aaaacetgag 900 rateeaaa tegataataa 960 ragaateee tgatgtetta 1020 rataggeae tttatatetg 1080 regteacaa aaaaaaaaaa 1140 |

```
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1050)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1478)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1541)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1632)
<223> n equals a,t,g, or c
<400> 1194
ggtcgaccca cgcgtccgct gacctccaaa acaactttga gacaccttct gagaaccgtt
                                                                       60
agcctgccag ctcacagtgt ggaaaagccc cacgttgaac tgttgctctt ttgcagcagc
                                                                      120
tcatccctgg gatcacccca ggccatgctc tctctgctca gcctgtgcct tcttaatcct
                                                                      180
caggcacctg ttttgcctga cagtggtacg tgcaccctcc cgttacaaag tggtgtgctg
                                                                      240
agggcactca gaaccatgaa gcatgcatgg tgcatcttcc tgagtgttaa ttttcctcac
                                                                      300
tggctattat ttaatccact acatttttat agtaaaagtt aacatagttc taattataca
                                                                      360
ccataggttc tgtctgtcct tctcaacaaa atctttttt tttttttt ttcaaacagg
                                                                      420
gtctcgcttc gttatccagg ctggagtgca gtggtgtaat aatagctcac tgcagccttg
                                                                       480
aactcctggg cacaagtgat cctcctgcct cagtcatgca agaaagtacc tagaactaca
                                                                       540
gatgtgcgct accgtgccca gctaattttt aattttttt ttctggagca gggtcttgct
                                                                       600
ttgttgccca ggctgatcta aaactcctgg cctcaagctg tcctcccttc tcagtctccc
                                                                       660
aaagtgttag aaacacaggc atgagccatt gtgtctagcc aacaaatttt tttaatgacc
                                                                       720
ctaattaaac atgttcaatt ttttatgcca aaagaaaata gatgtactat agtttagaat
                                                                       780
gtaacatttg tgtacaattt ttaaggaaaa aaataagatc aagaaattta aagtttccat
                                                                       840
                                                                       900
gggccactta gggttatgtc tttagtcttc ccargattat ttggtccctc agctctgaat
taggactact ttgatggaaa aggttagaac tacctattta agttgtcaga tttgtaattc
                                                                       960
tgtattttgg ttttgttcag tggagctatt ataacatttt tattcagcat ggaataagaa
                                                                      1020
ctggccatgg gttggtctct gaatcatcan gcttttctgg ttaaaggtaa acatataagt
                                                                      1080
                                                                      1140
attttttctt ttagccatgt ttaattttga aaaatgtcat taaagtaagc attgctgcat
                                                                      1200
 tataaaaatg attgacaagt ccgggcactg tggctcattt ctgtwatacc agcactttgg
                                                                      1260
gaggccaagg caggtggatc acgaggtcag gagttcaaga ccagcctggc cgatatggtg
                                                                      1320
 aaaccccatc tctactaaaa atacaaaaat tagccggttg tcatggcagg cacctgtaat
cccagctact caggaggctg aggcaggaga atcgcttgaa cttgggaggt ggaggttgca
                                                                      1380
                                                                      1440
gtgagccgag attgagccac tgcactccag cctgctgggt gacagagtga gactccatct
                                                                      1500
 caaaaaaaa aaaaaaaaa aaagggcggc cgctctanag gatccaagct tacgtacgcg
 tgcatgcgac gtcatagctc ttctatagtg tcacctaaat ncaattcact ggccgtcgtt
                                                                      1560
 ttacaacgtc gtgactggga aaaccctggc gttacccaac ttaatcgcct tggcagcaca
                                                                      1620
                                                                      1671
 tccccctttc gncagctggc gttaatagcg aaaaaggccg cacccgattg c
 <210> 1195
 <211> 506
 <212> DNA
 <213> Homo sapiens
 <400> 1195
 aggttcactc gttcagcaga cacgcatggg aactgatgct ttgagttttc ttctgtgggg
                                                                        60
 ttttcccttt ctctggtctc cgtgcagccc ctgccctccc tcgggtgctg ctggcctcaa
                                                                       120
```

| aggaggasct | catagagaga | gggtgtgatt | tgcagacctg | ggtctctgct | ctgctctggg | 180 |
|-------------------------|----------------------|------------------------------|------------------------------|--------------|--------------------------|------|
| aggaggaact | gettteacag | agaccctcct | tccctctcac | ccctcctctc | ccggcctcgc | 240 |
| carragtett | gactattage | agctcagagg | tgggggaggc | ctgtggtgtg | aggtgccctg | 300 |
| caggageeee | tactactata | accepttect | actacctcct | ccatgcccaa | ggaacaccca | 360 |
| tactaceata | ctcacccaac | accadascad | gactgaggcc | ctgcgtggag | atgctgcacc | 420 |
| aggragaaggc | taaaacccac | ttaccttagt | tcatctattc | actcgtaata | aaaagaattc | 480 |
| | aaaaaaaaaa | | | 3 | _ | 506 |
| tettaggtta | aaaaaaaaa | | | | | |
| <210> 1196 | | | | | | |
| <211> 1721 | | | | | | |
| <211> 1/21 <212> DNA | | | | | | |
| <213> Homo | saniens | | | | | |
| \213> 110MO | Dapieno | | | | | |
| <400> 1196 | | | | | | |
| cagacagccg | agcctgcgga | aggcggcggc | ggcggcacct | gcgatcagcg | gctggggcag | 60 |
| gttatggtag | tacagactac | ggtgtgagca | gagcggcmca | cggggcccgc | catgcgccgg | 120 |
| caaccctaac | atgggggca | gcgggtccaa | agctcggggc | ctgtggccct | tcgcctcggc | 180 |
| aaccaaaaca | gcggctcaga | ggcagcagga | gctgagcaag | ctttggtgcg | gcctcggggc | 240 |
| maactatacc | ccccttcgta | ttcacgcgcc | gsggctctat | gttctatgat | gaggatgggg | 300 |
| atctggctca | cgagttctat | gaggagacaa | tcgtcaccaa | gaacgggcag | aagcgggcca | 360 |
| agctgaggcg | agtgcataag | aatctgattc | ctcagggcat | cgtgaagctg | gatcaccccc | 420 |
| gcatccacgt | ggatttccct | gtgatcctct | atgaggtgtg | accctgggag | gtggcagaca | 480 |
| gaaggagggg | ctaccccaac | aagaaactcc | caggctcaat | caaggtgtgg | cttccattga | 540 |
| daadcccadd | ctggggccac | aaccctgaat | aaactctgtt | ggcccataac | cttcagctgt | 600 |
| gaggggggggg | gtcccacagt | attggttggg | tgttggtttg | tgtgtggaca | agaggtggtt | 660 |
| aataaataat | gaaggctaat | ggcagagtta | gcaccccact | ctcccaagcc | acccctgcaa | 720 |
| gcagcacagc | agggcatata | ccagtcagga | atgcccgtta | cctggttcct | tgcctggtct | 780 |
| actttcttcc | aagtttgcct | ggggcctagc | cctgctagag | gctacagcac | tttacaagca | 840 |
| aggtatgctt | tcttccaqcc | cctaggctgt | gggcactgta | tacaagtagg | aacttccttt | 900 |
| ccttcacttc | ccttttaacc | cctagtcaga | gcatttcagc | cgtttgctac | ctcgattcct | 960 |
| cctatattaa | acagaggctg | ggggcagtgc | cagcctgatt | cttccgacct | acctgccatt | 1020 |
| tattacaaca | ttcagatgga | tggacagttt | gctggctatt | gataggagtg | gggactgggt | 1080 |
| agaaacttct | ccctctaccc | agggctgggc | tgatccccct | actgcaacta | actgttgccc | 1140 |
| cccaaccccq | aacccccagt | tgaggagttg | agagagtgca | ggctggggtc | aggacaggct | 1200 |
| gcggatgctt | gtgcctatgg | ggagttactc | caacccacct | attctgtcta | atctccatgg | 1260 |
| ctttqcacca | aatcctccac | ccctccaatt | gggagggac | tgttcaccac | cttgtggtaa | 1320 |
| gggacaacac | cctaaggctg | gtgccagtag | ttatgagtag | cctaccaccc | cctcccttac | 1380 |
| agtaaccccc | accccttcag | gatcagtcaa | gggaaagcac | tagaacccct | gggtagggaa | 1440 |
| agaaaggagg | gaaaaaccat | aaaaggaata | cttataatgt | gaaggtttgt | aaatagtcca | 1500 |
| tgatgatgtc | gtggcagagt | ctgatttcta | tatagaggtg | acttttttt | taagtactgt | 1560 |
| gcaagetetg | tgcttctata | atgtgggaaa | tggcttgggg | aggatggccc | ctagcttagg | 1620 |
| aagactgttg | tgttatttgt | tcaatttcaa | taaaatgatt | tgtagatcct | gcaaaaaaaa | 1680 |
| aaaaaaaaa | aaaaaagggc | ggccgctcgc | gatctagaac | С | | 1721 |
| | | | | | | |
| <210> 1197 | | | | | | |
| <211> 1994 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| 1100 | | | | | | |
| <400> 1197 | | | 20202555 | caaaaaatta | ccatacatca | 60 |
| ggcacagcag | cgggctaaaa | ccacgagggg | tagatagata | cgggagcttg | ccatgcgtcg | 120 |
| tacacttgag | gtctgtatgt | cagtgcactg | agaggtagg | ctectattaa | atcctcgccc | 180 |
| aaggtcacac | agctcacaag | yyacayatcc | ttaceceas | ttagtggtgg | aggagccaca | 240 |
| caccctgago | cgcgcagcgt | tagaccayccc | accactataa | . ctugtgetta | gtaaatggcg aataactcat | 300 |
| atgtgggttg | gaaggegeat | rgcaaycayt | factactorya - tarractorya | actatcada | gctccatgca | 360 |
| gatctccaaa | gcaccctcca | ttaaasasat | attttaaata | r deateteet | ttccagcacg | 420 |
| cacaatatgg | cagaggagct | . ccgggagact | aadadtccct | actocotoco | taagctccat | 480 |
| ttgactggca | gergereda atttact | gytetettya | . dagageeeee | actoaaaooa | acattgatca | 540 |
| teteteetgg | gullyyalat | geryayayay aracaatara | gytayyyaaa | ttctcaaagt | aaatcactgc | 600 |
| agragaciag | tracecrors | . dygeddegga . cacaccccaa | atgagggato | tgagacttct | ctgccttggg | 660 |
| aggicaccat | . Lyugacygyu | | | | | |
| | | | | | | |

| gtgaaccagg | cgcctcccag | tgaaacccct | ccctgcatca | ccctctgccc | ctctttgtga | 720 |
|--|--|--|--|--|--|--|
| ggcctgtctc | cccatccccg | cattcctctt | gcttcaggga | cccctgsctc | actggtttat | 780 |
| tgctacccty | ctgccttctc | ctccctccct | ttccttgggc | tcgcatccct | ttgatgtttt | 840 |
| tacaagcctt | ttttyaaacy | tgcactcact | ggtgggtgaa | tcgcctccct | ctccttggga | 900 |
| gcattagtgc | ccttcctggc | ctccgccaag | ggggagggcg | gcttttatct | cccagcggaa | 960 |
| tctcattagc | tttgccgcac | aatgggaccg | aacctcggct | gccacagagt | ggatttaaat | 1020 |
| tagttaatag | cagattttt | tttttttt | gccccaggcc | tgttttttcc | aagtcttgga | 1080 |
| tactaaacaa | aaaaacaact | ttgttgttga | aaaatgtaaa | acaaaaaaat | attgaaggtg | 1140 |
| gagtgctttg | acaagacgga | agatcactgt | aggtgaagtt | ctcctgtgct | ccacagccac | 1200 |
| ccagaggaat | tccaaaacca | gcagtggagg | acttggggag | gacaggaggg | aaaacatggc | 1260 |
| gagttcatca | gctctgyttc | ctttattaaa | atatttctgt | aattggtggt | gggaaattga | 1320 |
| agaaatcaag | tgattgcatc | agegetggaa | aaagctgcca | gcacttggca | gtggaagaga | 1380 |
| atatatgctt | tatactggac | tttttqaaaa | agaggctgag | tttggccaga | ttgccgacca | 1440 |
| gcaatggaaa | aactaattag | gtgccttgcc | tgtgagccag | acgcccagca | gggctgtggc | 1500 |
| gcatggctcc | cgccgcctct | gaagaggaca | ctttctagtg | aattcagttc | gtgctaccct | 1560 |
| tgaggagggt | gtgctacagc | aggcacattt | gtgaatctcc | caacctgtgc | ctggcgtcgg | 1620 |
| aactgtagct | tcccaaagac | ttacctgccc | tgggagatgg | cgggcagctg | ctggccacag | 1680 |
| ccctagacct | gcacctttat | ctgcaaactg | ggagagcggg | gatgggagtc | agtgggtagg | 1740 |
| aggtggggg | aggcctgggc | ctcccagtgt | tcgggctccc | acactgctgc | cctcacccac | 1800 |
| tatotocato | ttcccaactt | ctggacatcc | tcactcctcc | tctqtccaat | gtaaatcaga | 1860 |
| atagtgcacc | gggcgcagtg | gcgcacgcct | gtaatcccag | cactttatca | gactgaggca | 1920 |
| gaagaatgag | ttgagccagg | agttggaaac | cagectagge | aatacagtga | gaccctgatt | 1980 |
| ctacaaaaaa | | ageeggaaae | cagootgggo | aacacagega | g | 1994 |
| CLaCaaaaaa | aaaa | | | | | |
| <210> 1198 | | | | | | |
| <210> 1136 | | | | | | |
| <211> 443 <212> DNA | | | | | | |
| | acriera | | | | | |
| <213> Homo | saprens | | | | | |
| .400. 1100 | | | | | | |
| <400> 1198 | | | +aa+aa+aaa | ttattaatat | taaaaataat | 60 |
| ggcacgagaa | acggtagtat | catggagaga | tcataataaa | tteetatatata | caaaagtygt | 120 |
| tttgctttca | gttagggaga | aaaattagat | tgtactattt | cccccatg | atticcitta | 180 |
| gttatcttcc | aaatgttgtt | ttttccccac | ageceeetta | acattyttet | ctatgcattt | 240 |
| ctcaatacat | tttcatttgt | ttctcaagcc | tetttgtgga | tgactectaa | tacattac | 300 |
| ttccactagc | tctagatccg | tatttccaat | aaaatcccct | acctgaatat | tcaagttaaa | 360 |
| catgtccaga | atacttactg | attttattgt | taatageeae | cattenging | tergyaarta | 420 |
| | aactaatttg | | tettettagt | caataaaacc | tacaatcctc | 443 |
| tttctaaaaa | aaaaaaaaaa | aaa | | | | 443 |
| | | | | | | |
| <210> 1199 | | | | | | |
| <211> 1560 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1199 | | | | | | 60 |
| ggcacgaggg | cagatggacc | ttgctttggt | ccagctctt | teettaeeet | ggetetgaeg | 120 |
| tgggaaggct | tggagggccc | gtctcatcac | ccccgttcgc | cctcagctgt | ccctttccct | |
| tgtcgcctgg | ccgctgcctc | gcccgcctga | ggcctcctag | caggcagcct | gggtgtgagt | 180 |
| tgagcctctc | tcttttccct | ctggtgggaa | agtggccttt | ccctcaacac | ctgctccccg | 240 |
| gccccagagg | aacccacctq | ++++~~~~ | | | ~~~~~~~~ | 300 |
| | | ttttggaget | cagerragee | cagegittee | ccggggaagg | 200 |
| gaaaggaggg | ctggacagca | ctgatccggg | caggcagcgt | gtgcagcagt | ggccagccag | 360 |
| agtgccaaag | ctggacagca atgcacgggg | ctgatccggg atgtggtgtg | caggcagcgt tggctccggg | gtgcagcagt ccctcgacat | ggccagccag ctctgctttg | 420 |
| agtgccaaag ggggattttt | ctggacagca atgcacgggg accttgtctg | ctgatccggg atgtggtgtg cacacttgtc | caggcagcgt tggctccggg aggggagagg | gtgcagcagt ccctcgacat ggacagcaag | ggccagccag ctctgctttg gtgggaagtt | 420 480 |
| agtgccaaag ggggattttt gaagagcttt | ctggacagca atgcacgggg accttgtctg gaggctcagc | ctgatccggg atgtggtgtg cacacttgtc akcatgtytg | caggcagcgt tggctccggg aggggagagg tggcattcgg | gtgcagcagt ccctcgacat ggacagcaag tggacaccat | ggccagccag ctctgctttg gtgggaagtt ggccttgggc | 420 480 540 |
| agtgccaaag ggggattttt gaagagcttt ggctggacag | ctggacagca atgcacgggg accttgtctg gaggctcagc gtttttgtga | ctgatccggg atgtggtgtg cacacttgtc akcatgtytg tgtgagggac | caggcagcgt tggctccggg aggggagagg tggcattcgg acgcatgggg | gtgcagcagt ccctcgacat ggacagcaag tggacaccat cacatggtaa | ggccagccag ctctgctttg gtgggaagtt ggccttgggc gcttggcaag | 420 480 540 600 |
| agtgccaaag ggggattttt gaagagcttt ggctggacag ggctccagga | ctggacagca atgcacgggg accttgtctg gaggctcagc gtttttgtga acgctgacga | ctgatccggg atgtggtgtg cacacttgtc akcatgtytg tgtgagggac aaggttttag | caggcagcgt tggctccggg aggggagagg tggcattcgg acgcatgggg gacccccacc | gtgcagcagt ccctcgacat ggacagcaag tggacaccat cacatggtaa cccatgcctg | ggccagccag ctctgctttg gtgggaagtt ggccttgggc gcttggcaag taccaaggct | 420 480 540 600 660 |
| agtgccaaag ggggattttt gaagagcttt ggctggacag ggctccagga ggcctccaga | ctggacagca atgcacgggg accttgtctg gaggctcagc gtttttgtga acgctgacga gcgggtgagg | ctgatccggg atgtggtgtg cacacttgtc akcatgtytg tgtgagggac aaggttttag acagagcagc | caggcagcgt tggctccggg aggggagagg tggcattcgg acgcatgggg gacccccacc | gtgcagcagt ccctcgacat ggacagcaag tggacaccat cacatggtaa cccatgcctg | ggccagccag ctctgctttg gtgggaagtt ggccttgggc gcttggcaag taccaaggct gtcttggccc | 420 480 540 600 660 720 |
| agtgccaaag ggggattttt gaagagcttt ggctggacag ggctccagga ggcctccaga | ctggacagca atgcacgggg accttgtctg gaggctcagc gtttttgtga acgctgacga gcgggtgagg | ctgatccggg atgtggtgtg cacacttgtc akcatgtytg tgtgagggac aaggttttag acagagcagc | caggcagcgt tggctccggg aggggagagg tggcattcgg acgcatgggg gacccccacc tgtgggcttt tcagggcttg | gtgcagcagt ccctcgacat ggacagcaag tggacaccat cacatggtaa cccatgcctg tcattctgag caaaaaccaa | ggccagccag ctctgctttg gtgggaagtt ggccttgggc gcttggcaag taccaaggct gtcttggccc ccttcgagaa | 420 480 540 600 660 720 780 |
| agtgccaaag ggggattttt gaagagcttt ggctggacag ggctccagga ggcctccaga ccctggccac agaaaaggga | ctggacagca atgcacgggg accttgtctg gaggctcagc gtttttgtga acgctgacga gcgggtgagg cgcaagggac actcttcacg | ctgatccggg atgtggtgtg cacacttgtc akcatgtytg tgtgagggac aaggttttag acagagcagc tctttgcttg | caggcagcgt tggctccggg aggggagagg tggcattcgg acgcatgggg gaccccacc tgtgggcttt tcagggcttg actttgtgtg | gtgcagcagt ccctcgacat ggacagcaag tggacaccat cacatggtaa cccatgcctg tcattctgag caaaaaccaa tatgcgtgtg | ggccagccag ctctgctttg gtgggaagtt ggccttgggc gcttggcaag taccaaggct gtcttggccc ccttcgagaa tgtgtgtgtg | 420 480 540 600 660 720 780 840 |
| agtgccaaag ggggattttt gaagagcttt ggctggacag ggctccagga ggcctccaga ccctggccac agaaaaggga tgtgcacgcg | ctggacagca atgcacgggg accttgtctg gaggctcagc gtttttgtga acgctgacga gcgggtgagg | ctgatccggg atgtggtgtg cacacttgtc akcatgtytg tgtgagggac aaggttttag acagagcagc tctttgcttg ttgaatgttg | caggcagcgt tggctccggg aggggagagg tggcattcgg acgcatgggg gaccccacc tgtgggcttt tcagggcttg actttgtgtg atggaatttt | gtgcagcagt ccctcgacat ggacagcaag tggacaccat cacatggtaa cccatgcctg tcattctgag caaaaaccaa tatgcgtgtg gttttgtgaa | ggccagccag ctctgctttg gtgggaagtt ggccttgggc gcttggcaag taccaaggct gtcttggccc ccttcgagaa tgtgtgtgtg | 420 480 540 600 660 720 780 |

| gagttgaggt atcctgcagt tacgggctgc aggaaaacgg ttcaggttca gcagggctcc tctggtttgg | tgtggagggt taaaaggcag ccacagtgcc attcacttgc gtttgttgtg tttgaagaga ccagaggccc gaagcacgtt | ctctcttctg tgggagaaac ggagggctca cccttttctc tgattttgtt taaatggcgg tggttccacc ctccggtcca tccaccagct taaagacacc | tgaagttcta gcccgggccc tagccgaatc cacggcggaa ttttttctgg tcgtggtctg cgtcaccctg gtattcaaca | tacatttcca cacagctcca tttttcgaac gcaccatgtt tgtgagcttt aagaacaaac agtacaccc ctacaatgca | tagagtttac ggccatcccc agcccgggaa ccgttccttt ggtgatggtg cagagaagag tctgattgct tttttaaac | 1020 1080 1140 1200 1260 1320 1380 1440 1500 |
|--|--|---|---|---|--|---|
| <210> 1200 <211> 463 <212> DNA <213> Homo | sapiens | | | | | |
| aatactgaat gcaaatcttg atatgtgtgt tggtgttctt ttctccgcac ataaaatgta | gtgactgttg gaattttgtt gtgtgtgtgt ctggaggttg aaagtaaaga aaacaaaact | tagtttctgc aaagctggta ttttgctgtt gtgtgtgtgt tctctttggt gcctaatttt ctagtcaacg aaaaaaaaaa | gaattcatcc tccagatgta gtgtgtgtgt caaggtgaac gtgtattctg tagaaagagt | ctcttactgt tctataaata acatcgggtc ttttaatgtt gtggctgctg taactgtgct | agataacact tctatacatt ctcccatgtg tattattttc tcatgagatg | 60 120 180 240 300 360 420 463 |
| <210> 1201 <211> 477 <212> DNA <213> Homo | sapiens | | | | | |
| tgtttagatg aaaccagatt tccccccacc ttatgtatat tgtaactacc | attacaccac tgtatgaaat ctttgcatct cccgcatgcg tcttaactgg gtgtgatcag aggggtgacc | tttagaccct acctgtatac gggccctcta tctgtccact actgtctcgt taagattcct tatatcccaa aatagaaaca | gttagtgaaa ctgattgtta tggctaactt ttagactgta gtaagaaata aaaaaaaaa | gctgtttact aaggagttcc ttaatatgtg tacatcatat ctgcttttta aaaaaaaaa | gtaacgggga tgtcacctgc tatttttaca ctgacattat agaaaaaaaa aaaaaaaaaa | 120 180 240 300 360 420 477 |
| <210> 1202 <211> 687 <212> DNA <213> Homo | | | | | | |
| gctctgaago gaggcaggtg tgcctatgtt ttataccaca tcaagtctta agtggccctg tttggtgctt ttcctcatto gcagctccco | aaaacctgag ctgctggaaa gcctgtggac cccccgatga gtggagagcg catgcccatt agacacgtga tggctctgg | cttggtggca agaagtaatc gaggaaacag ggtcacagga cagcttctag acacctccct cacacctaac ctttaagaaa ccccaaataa aaaaaaaaaa | tccaacctgo ctctttctgo gctgagagaa catgatgcag gccccctca cctatgcatc tagcattggo tcctgcctct | ctcattcggc tcaccccagg gaaaaatgac ggtccaggtt cctccctgcc acaaaccttc agaggagagt gtgcagcaga | ttctaggata ctgaccggta cagacacaac tgctccagga tctgttttga ctcattcaca tccaccgagc ctacactctc ggagctggag aaaaaaaaaa | 60 120 180 240 300 360 420 480 540 600 660 687 |

<210> 1203

```
<211> 1877
<212> DNA
<213> Homo sapiens
<400> 1203
                                                                      60
ggcacgaggg ggaatacggg ctgtcagcaa gacgctgcag gggtcaagga ggagagcaat
gaaggacagg aagcagtggg cattcaagac tcgctggcct tttttccatt ttctcatgct
                                                                     120
ttctttggca cttgactgct acaggttttt aacttcctga actgtaccgt ccatcatgga
                                                                     180
                                                                     240
aggeteteet caettaetaa ggetaaaaac acaggeteca tageetette attttateae
                                                                     300
actaatggtc gaaaggttct tatcctattt tgcatttgtt tcttgagggg aacttgagaa
                                                                     360
gcaaaactct ggagccatgc tccccacgtg caaatctgag ctctaccact ccctgctctg
                                                                     420
tgaccatggg caagtcactt agcacgctat gcctcagatt catttttaaa attaggatgg
                                                                     480
taatactagt atcttcacaa gattttatga ggattaaatt agctgttggg cactgttgtg
                                                                     540
gttaatttca ggtgtcaact tggctaagct aagtgatacc cagatagctg gtaaggcatt
acttctgggc gtgtctgtga gagagtttct gcaaacatta gcatttgatt cagttgactg
                                                                     600
                                                                     660
agtaaagaaa atcaccctca ctgatgtggg tgggcagcac acaatccatt gagggcccag
                                                                     720
atagaaagac agagtgaagg gtgaattccc tctctgctta aactgagaca tccatctcct
                                                                     780
cctgccctca atatcagtgc tcctggttct tgagccatca atttgaactg ggacttacac
                                                                     840
tgttagcccc tcaccccagt ttctagcctt aaggtctaat ggaatttgac tgtcagtcct
                                                                     900
gtctttcttt tgatttctcc cttttggaat gggaatgtct atcctatgcc tgtcccccac
                                                                     960
tgtattttaa aagtgcataa ctcgttttgt ttaacgggtt tatagctgga ggggaatttg
                                                                    1020
ggctcaaaat gaatcatatc ttaggtccca cccagatcag atttagacaa tatttagatg
                                                                    1080
agactttgga cttagatttt aaggttgatg cttgacttta aatgctatta ggatggaaca
                                                                    1140
aatgggagga cataaatttt gagaaaacgg ggcgaatgct atagatggaa tatttttgtt
                                                                    1200
cctccaaaat tcgtatgtta aaacctaatc cccaatgtga tagtgtttgg aggtggagtc
attggggggt gattaggttt tgaggatgaa accgtcatga atggaattca tgcccttata
                                                                    1260
aaagggaccc cagagaactt ccttgactct tacacagcaa gaatgcagcc atccatgaac
                                                                    1320
caggaagagg acceteacea gacagtgtat gtgccatgca etttgateta ggactteeca
                                                                    1380
gcctctagaa ctatgataaa tacatttcta ttatttataa gccacccagt ttatgatatt
                                                                    1440
ctattaaagc cacctgaaca atgtaaggca ggaacatgat aaatgctcag taaatgttaa
                                                                    1500
                                                                    1560
gggaaaaaat cctccttgaa aacataacac atttattcag catatgtctg ataaaatcct
tgtagtatgg agttgatatc agggttgtgc agttcatctc cgtcctcaca ccatgtccag
                                                                    1620
cggcttcctg aagactctgc acagtgactt ctatgtgaac tgaagccagt gccacagtca
                                                                    1680
atacttagga ggtgatggtg aaaaacggtc atggttctga aaataagcca tgcatttgta
                                                                    1740
tgttggaaat cttccctttg cataactgga aaacaaatct atgagttttt cagcaaaagt
                                                                    1800
ggagacataa aaaaatcatg cgggcctaaa taaattaaaa atcaattaaa ggcaaaaaaa
                                                                    1860
                                                                    1877
aaaaaaaaa aaaaaaa
<210> 1204
<211> 782
<212> DNA
<213> Homo sapiens
<400> 1204
ttccggcaca gtrgggaacc acttgttttt ctaaaaaata ttgttctgtg atcctctgaa
                                                                      60
gacaagctgt gatttgtgat gtttagtatg ttagattgtg gactggcatc ttcttgatgg
                                                                     120
agctgattct aaccttagaa taatttttgc tttcatcaat cttgtcctct gattatcaaa
                                                                     180
ttagggccat agctgtattt tcatggccat attattaacc ttcttagttt atgtaattat
                                                                     240
tacatccata ggaaaacagt tacacaaaaa gaatttgtat attttcaact tctagcagtt
                                                                     300
tgtaattact cagctcctga aattaaagaa atttaatcag ttttagtcat cttgtcttgg
                                                                     360
ttgccatggt ttggaaggaa ataccaaata gatttgaatc agtagactag aaggctgctg
                                                                     420
tttaaacaca tgaaataatt ttttaaaaaag ctttctgggt tgggcgcagt agctcatgcc
                                                                     480
                                                                     540
tgtaatccca gcacttgggg aggccgaggc gggtggatca cttgaagtca ggagtttgag
accagcctgg ccaacatggt gaaaccctgt ctccactaaa aataaaaaaa aattagctgg
                                                                     600
                                                                     660
gcgtggtggt gcacccttgt atttccagct actttgggag gctgaggcag gagaattgct
tgaactcagg aggcactctc atgaggcgga ggttgcagtg agctgaaatt gcgccactgc
                                                                     720
780
                                                                     782
<210> 1205
<211> 1003
```

| <212> DNA | | | | | | |
|------------|------------|--------------------------|---------------|------------|------------|--------------|
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1205 | | | | | | |
| | | agtttcagtt | | | | 60 |
| | | gtgcctgtta | | | | 120 |
| | | tgtccagtcc | | | | 180 |
| | | cggagcctaa | | | | 240 300 |
| | | tctgggtcat | | | | 360 |
| | | tgtggggctc | | | | 420 |
| agttcgtcca | gaagcagatc | ctgagataga gaaatgagac | aggaatag | aggaagagag | tassasata | 480 |
| | | ctgtaagcta | | | | 540 |
| _ | | acctctgaat | | | | 600 |
| | | tcctgagagt | | | | 660 |
| | | gtgcatatgt | | | | 720 |
| | | agcagagaaa | | | | 780 |
| | | acaaaggagt | | | | 840 |
| | | ggccgagcat | | | | 900 |
| | | ttgattgagc | | | | 960 |
| | | aaaaaaaaa | | | | 1003 |
| | | | | | | |
| <210> 1206 | | | | | | |
| <211> 1692 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1206 | | | | | | CO |
| | | agctctcgcg | | | | 60 |
| | | gagagtctgg | | | | 120 180 |
| | | gtacttggaa | | | | 240 |
| | | acctcgagag | | | | 300 |
| | | atggccagcg gcaacaagat | | | | 360 |
| | , | ccatgttctc | | | | 420 |
| | | acagaccttc | | | | 480 |
| | | tcacttgtgt | | | | 540 |
| | | agtttgatgt | | | | 600 |
| | | gggaagtcaa | | | | 660 |
| | | ttgtgtctga | | | | 720 |
| | | atgggtttat | | | | 780 |
| | | ctgtcaccac | | | | 840 |
| caccgtggcc | ttgtgtcaac | aaaagtgtag | acggacgggg | actctggagg | gcaattattg | 900 |
| ttcaagtgac | tttgtattag | ccggcactgt | tatcacaacc | atcactcgcg | atgggagttt | 960 |
| | | tcaacatcta | | | | 1020 |
| | | ggctgactgt | | | | 1080 |
| | | tgggccaagt | | | | 1140 |
| | | tcaagaccaa | | | | 1200 |
| | | ctgtgtccat | | | | 1260 |
| | | aaaaaaaaat | | | | 1320 1380 |
| | | tgactcttca | | | | 1440 |
| | | gctgtcagag taaaagtgtc | | | | 1500 |
| | | ttttagaatt | | | | 1560 |
| | | tgttatttgt | | | | 1620 |
| | | ctaaatcaat | | | | 1680 |
| aaaaaaaaaa | | | J = = = ===== | | J J | 1692 |
| | | | | | | |
| <210> 1207 | | | | | | |
| <211> 1274 | | | | | | |
| <212> DNA | | | | | | |

<213> Homo sapiens <400> 1207 ggcacgaggt gaggtactgt taggttggtc agactgatag tttattgtac gtattgctgt 60 aatatctttg tacatttagc ttttccatgt ttgtaccata tctttgggtt ttcagaagtc 120 180 tgtctctctc tctgtttctc tttttgtctg tcttttctat ctctcacctt catttgggga gcattttgtg ttctctttca caggactaat taagttttat tggatcttga aaaacgggat 240 tagaaatttt ttcttactta tataattaga aamcaatgct tttggactta cattgccacg 300 360 gcagtttaca cagttttatt cccaaaaatt gtagttttgt gactaggtga taaaaatgat ctcctatatg tgccaaactt ggtattctag acactcatac ttaggatgta aattgactgt 420 480 agtccaataa tttaatatgt tgtgtttaat tcttgtaata ttttactcac aaattgaact 540 tttccttacc aatttaatgt ttgtaggctt aatttggcat ctttgtcagg attattagac 600 ttctctgcat tcttctgact tctccctaaa ctaatgttta gaactgaatt gggtccagca atttaagtgg aaaatcagta tgactagaga cttctagaaa cttctggtgt cactgagatg 660 720 gtgaatttga tgattctgac cctacttgct catctgtaaa agctattaga ggattgtttt 780 aagcatttct attctataca ggtatatgta caccatgtaa taccactcag ccataaaaaa 840 gaatgaaata acatttttgc agcaatttgg gtggagctgt aggccattat tctaagtgaa 900 gtaactcagg aatacaaaac tgaataccat atgttctcac aagcgggarm taagtcatgg 960 gwacgcaaag gcatacagaa tagtaaaata gactttggag actgagacgc ggggagaata 1020 ggaagaagat aagggataaa aaacgatata ttgggtacaa tgtatgctac tttggtgatg 1080 ggtgtagtaa aatctcagac ttcaccacta tacatttcat ccatgtaacc caaaaccact 1140 tgtactycaa aagctattgr aataaaaaag atatttaaaa aaaaagaggc caggcaggtt 1200 ggttcacgcc tgkaatccca gcactttggg aggctgaggc gggcggatca cttgaggtca 1260 ggagttcggg accagcctga ccaacatggt gaaaacctgt ctctactgaa aaaaaaaaa 1274 aaaaaaact cgag <210> 1208 <211> 1601 <212> DNA <213> Homo sapiens <220> <221> SITE <222> (12) <223> n equals a,t,g, or c <400> 1208 aaggaagaga antagaatca gaagttagga catctattgc ttgatgcttc tgggatgggt 60 aagacgtagt tctggtgata gaagttgaag ctgcagcata atgagagatg aaagagaaac 120 tgctcttctg gtgattttaa ccctagggat gtagctactg ggacaggagg aagtgaggga 180 cccagtgctg cagggtccct gttgtcacat atgtcaatcc tactttaaag tcaaataatg 240 300 gattctggct gataaagcct atcagaatta tggtgttgat acgaaagtgt cacatagcca ccaaaatgtg ttctctactt tcttgctttg ctctgattag ctaagtcttg gtcacatggc 360 tttatagcac tgggaaaacc aggatctggt cttttatagg gtaggaagtg agccctatct 420 tttgtgtaga tttgtggcgg ggagtttccc aagcatggga aatgggctca gatgatgtgg 480 ttataaaatg tgaatgtcca ttaaaaggca gtcagtgttg gctactctaa gccttcaaat 540 tgttgctttt ccccttcaac agggaccaag gggagatact ggaaacctct gagcttcagc 600 660 tgttggtttt tgggttttgt ttttgtttta ttgagataca gttcacttaa ctatacagtt 720 tacccattta aggtatacag tgttttttag taatttacag aattgtgcaa ctattmcaat tttggamcat ttttgacacc tccccccaa aaaaaccccw atgcccctta gcagtcatcc 780 tcagtctcct cagccctagg caaccactca tctactttct gtctttatag atttgcctat 840 900 ttgggacatt tcctataaat ggaayctgta tgtggtcttt scttggtttt gtttttgggg 960 tggtgggggc tgactactta gtcttgacaa gccaaggtcc caacccagca gtagaaatat 1020 aaggagtcac ggctgtgagg atggcctcac aatgggctca gggtagtgaa cttctgtccc 1080 ctaagttatc tcagaaatga ggccaactct ctgccctcta gaatggatgg ccctgaggga gagaaaggtt catgtccttc ctggctggtg acagaaggct ggactgtgcc tgaaatcaaa 1140 gcttctcacc tggatttggg caaatcaagc agtcccgaat ctcagggtgg ggtgagatgt 1200 gtgctgaaga gggcaacaca ggagctgcac tgcagatggc gacatgcagg gtttcaaggc 1260 1320 1380 gtaatcccag cactttggga ggctgaggtg ggcggatcac ctgaggtcgg gagttcgaaa 1440 ccagcctgac caacatggag camctctgtc tctactaaaa atacaaaatt agccgggtgt

```
ggtggcgcat gcctgtaatc ccagctactc gggaggctga ggcaggagaa ttgcttgaac
                                                                   1500
cccggaggta gaggttgcag tgagccgaga tcacaccatt gcactgcagc ctgggcaaca
                                                                   1560
                                                                   1601
aaagcgaaac tccatctaaa aaaaaaaaaa aaaaactcga g
<210> 1209
<211> 766
<212> DNA
<213> Homo sapiens
<400> 1209
ggcacgagtc catgagaagc acccgggcaa acttgctggc tatatatcca gcctgctcac
                                                                      60
cctgacaggc tttgctacag ctatggctgc tgttgtcctc tgcgtgaata gcttcatctg
                                                                     120
                                                                     180
gcaaactgaa ccctttttat acatcgacac tgtgtgtgat cgctcagacc ctgtcttccc
taccactggg tacagatgga tgcggcgaag tcaagagaac caatggcaga aggaggagtg
                                                                     240
                                                                     300
tagagettae atgeagatge tgaggaagtt gtteacagea ateegtgeee tgtteetgge
                                                                     360
tgtctgtgtc ttgaaggtca ttgtgtcctt ggttccttgg gagtaggtct tcgaaacttg
                                                                     420
tgtggccaga gctcccagcc cctgaatgag gaaggatcag agaagaggct actgggggag
                                                                     480
aattcagtgc ccccttcacc ctctagggag cagacctcca ctgccattgt cctgtgagcc
gccaaagacc ccacggggtg cccgcatgtc cctgtctagg gcagcccagg gcccccactc
                                                                     540
                                                                     600
ctggctcctc acacttgcct cccctatggc cgctctccag accctcctcc tttcttctcc
                                                                     660
ccacatccgc acctgctgtt cccactctgg ggttctcaag tccatgaaca gatattgttg
                                                                     720
cattttccac aatgctgatt aaacataata aacaatccag aaaagcagtt ttgcccagaa
                                                                     766
<210> 1210
<211> 3237
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (6)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (32)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (3237)
<223> n equals a,t,g, or c
<400> 1210
ntccgnaatt cccgggtcga cccacgcgtc cngcaacaac tatttttatg atgggatggg
                                                                      60
ggagtatata cacgtataga atctgtacgc gttgaacaac ttggttcaag atggtggggg
                                                                     120
catttttaga gcggcaataa ttgaaaaaaa aggcgaactc tgccttggag aggtagatga
                                                                     180
taagaaataa aaaggtgttt ataactattt tgtattataa agtgggcctt agagatagsa
                                                                     240
agaagaatga tggattcctt ttggatcaat cagaaaggaa acacgaaaga aaagtcagga
                                                                     300
aggtagagag agaaaaaggg agggaaggag aaagaatggg aataaaataa ggaggtaaga
                                                                     360
gatactattt ttgctgagca accagtgtgt ttcaggatga tacaaagaaa aatatagaat
                                                                     420
agaaataagt gcaggcttgg aatcagctac aaatcctaaa gatggggtgt gtgtggatgt
                                                                     480
gtgtgtgtgt gtgtgtacac cattgtgtgt ttgtaaaatg tgtatgttca tgagtaaggg
                                                                     540
tgtgtgtgtg tgtgtattaa aattccagag tgaccgtggc acttgggtgt acaggtaatt
                                                                     600
cctccagagc tgtttgctgg cttcaggagt ggagtgagaa tttcttttt atgaaaaggg
                                                                      660
```

| atataaaggc | accgagctga | tgcagtattt | gtaatattaa | gttgacctaa | caaggtattt | 720 |
|-------------------------|--------------------------|-------------|--------------|--------------|--------------|--------------|
| gcatgagtca | caattacaaa | gttttgagcg | gttttgtaat | ttgacattta | ggaaagtctc | 780 |
| ctatttattc | tcatacttta | cattcatgct | tagtatacta | tagaggatgc | cagctttaat | 840 |
| ctttctgtca | tttaaagcaa | tatgataagg | gtattcaata | attgggtgcc | ctaaatttct | 900 |
| ggatgagaaa | attttcaatt | ctggccatga | gaaagaaaaa | aaaataaaca | gccttcttt | 960 |
| tttttccttt | gttttaaaac | tgtggttttt | taaaaaagca | ataattaact | cagacctcac | 1020 |
| taaaaatcat | ttttgtttt | atattgttat | gtcataagct | ctattatgtt | attctaacaa | 1080 |
| gtagcaattt | cacaaaattt | gtatgtagat | gttaacgcac | atttcctttg | cttcttttat | 1140 |
| tagactagtg | ttgactttgg | ggggggacat | ttattcacaa | atgagaagta | ggcacaaagt | 1200 |
| aaaaaatgga | accatctact | aacaaggatc | ctttaaaact | gccaagggag | ctctaacttg | 1260 |
| aagccacatc | ctacagatgg | cagcccaaat | agcacatggg | caattggcac | catctttata | 1320 |
| tggttgagtc | tcctgaatat | tttgaatgaa | ttctcaacaa | aatgtgctag | ccactgggga | 1380 |
| cgcaaaacaa | gtaagatccc | tgttgcaaga | aattcatttt | atagtgaggg | aggttggcat | 1440 |
| ggagactaaa | attctcagga | aaatgagatc | cgtgttagat | tagaagtcct | gatgtgaaat | 1500 |
| gggaggactc | aggaaggagg | atcgtcttta | cctgaggatt | tctagccaga | ggtcccagat | 1560 |
| gcctgggctg | agaacccagc | gataaggggg | cgttcccaaa | gcagacacag | ggataagaac | 1620 |
| agaggaggca | gcagcattgc | acagccccag | gcacagtggc | agttaggatg | gctggagagt | 1680 |
| aggatagttc | tatgggttgc | ccaaaaaatg | tgatgygctt | catgttttct | ctgactcatg | 1740 1800 |
| gatctggtag | agaccataga | catgatatag | actaacttcc | ccatttttca | caagaggaaa | 1860 |
| ccatccttat | gacttacctt | aaagtttttt | gttctgtttt | gaaggaaacc | argreettea | 1920 |
| tgaaacctac | agttgacaag | agaatgtaca | gctaagagaa | aagcttaaga | ggccacacta | 1980 |
| ttcgcggaat | ggctttagag | gcagatgaag | tggtctttga | ccacagttga | Ligaaccaya | 2040 |
| gcacttattg | cttaaagaat | aacagagttc | tagagctggg | ggttettggg | ccatgeteeg | 2100 |
| tgtgtggata | aggaaagaaa | tactgtttct | gggactctcc | cacagtcaca | taggetete | 2160 |
| cactgtggcc | cctacatctc | ttaacttttg | ctattactcc | tatgetgeet | receggattae | 2220 |
| tgctgtctat | cttcttgctc | cactcactga | agatectatt | ataatcccat | tattaattaa | 2280 |
| attacagttt | acttgggaga | gccagatttt | ctctgtgctc | ttgagttttt | tacccactca | 2340 |
| agaaaccttg | ggccaccgct | ttgtacatag | caccgtgcta | ggctctggga | atagataata | 2400 |
| acccttttaa | ctttctgaag | atgggaccgt | cccctggagg | aaagtcattc | aggggaaat | 2460 |
| catcgagaga | aagaggctta | cgaaaaactt | tgcctctgat | gereageeee | acccccaaac | 2520 |
| agcacacaag | cttgttaacc | ccacctctta | caaaatgttt | agattetgta | tagagagata | 2580 |
| gcctttctgg | aagtattgca | ttctgccgtg | tttataggtg | cteactitee | catatataa | 2640 |
| attaactact | gacatgactt | ggctttctca | tccagaaatt | acygaaacay | tacctatta | 2700 |
| tggcaggagg | ccgtgctgtg | ttttacttgg | atgacacaat | geageteace | atcaatctcc | 2760 |
| tacccatgca | tgctgctcac | cctagacaat | gacatataay | ccgtatatag | ctasascart | 2820 |
| acatatatat | acacacac | atatatatat | acadagigia | tttcccaact | aaagaatgga | 2880 |
| gttgattctt | gtctctgaag | acaaataatt | adaccittt | ttagagatga | traatatatt | 2940 |
| tttaattaaa | ctatgtattg taaagaacaa | aaaaaaaagt | ttttaaggat | tcagagacgg | accaatttta | 3000 |
| ccattttagt | gctctttacc | accidentate | tttctttctt | tttctttt | taggggggg | 3060 |
| attttgtgtt | gctctttacc | tatattacce | aattatactc | tatatataat | tttcctatat | 3120 |
| ggggaaaaaa | cttaaatgtt | attatectee | tttaatttta | gagtgattgt | gaggcattca | 3180 |
| atgitaacca | acagttattt | tctcattaaa | atccaatgtg | tattaaattt | ttataan | 3237 |
| atycaaytat | acagetatet | cccaccaa | acceaacgeg | 0900905 | | |
| <210> 1211 | | | | | | |
| <211> 2070 | | | | | | |
| <211> 2070 <212> DNA | | | | | | |
| <213> Homo | saniens | | | | | |
| \215° 1101110 | Dapieno | | | | | |
| <400> 1211 | | | | | | |
| dacacdaacc | . cagaagtaaa | gaaaagggag | ggttttaaaa | taaataaata | cataaacagg | 60 |
| attttattt | tcattttcag | aaatatctct | aaaagcaaat | agttttacag | gcgatatcatt | 120 |
| atatototta | aacttccagc | tctctgagta | tgacttctgc | : atttttattt | ttatttttag | 180 |
| attcagtttt | gttcacttgg | gcatgtgtat | ggcttggaga | a caggcaggaa | tgccaaaaag | 240 |
| ctggtagato | atggcaactg | tgatgagcag | aagaactcac | : tgcctcagtt | : acctggatgt | 300 |
| gggccatttt | ctttccctqq | agttggaggg | cgggcaacaa | ı tgttgaaact | : ggctggaagt | 360 |
| tgagagagaa | actgaatttg | tttcagggcc | : tagtgatatt | : ttagtgcata | attttataaa | 420 |
| ataacagcto | catyccatga | atataggaga | . ggaaaaagat | : tattgagaaa | ataattttt | 480 |
| tacaggcact | ggtacttttt | tttcatgttt | tgtgttgtag | , ttgcatttta | a ctagagcagc | 540 |
| tgacaccatt | cctatgtggt | ctgattttgt | agttcaaaga | a ccaaaaccaa | a ataaaaagat | 600 |
| ctactcttta | a aaaactctct | tttccaatga | gaggattato | g gaaaaagtga | a cagtgattga | 660 |
| | | | | | | |

```
aagtctgtgt tctatttgcc agagtggggg agggagtggt aaggcaggtt gactgggata
                                                                      720
gaccagtcac gaaggagctg gaacattcac ccaggcccat tgccatgtga mttgtagaag
                                                                      780
gtctgtgggg aagacaccat ctgccactgt ttggcaggat ttggccacca tggcacagag
                                                                      840
tgggcaattg tcctcaacct tggaggcaga agctggcagc tggccaaaag tctgctttct
                                                                      900
                                                                      960
cccagaagag ataggcagty actgagccga gatactgatg atgtctctct cttatcgtgc
                                                                     1020
aacatggaga gcgggagaaa atgagggagg acagaagaga ggagaaggag gaggaaaata
                                                                     1080
agaaaaggaa tactaattaa ctcagcctgt ctatccagct aagcttgagc ttgattttgc
                                                                     1140
tctctagttg aatggaacat gcaacctgaa tttctgaata acagaattac caaattactg
                                                                     1200
tttaagtgtt tgagaaaaaa aggtgaaaag tgtgtgtact atatgtatag acgtatagat
                                                                     1260
tgacatatag tgaattggtt aattgaatgt ctgcatcaga taagaaggtg ttaggtcaat
                                                                     1320
ttccacaata atgccattaa aatcggttct ttgattaaat ccaattaaca gatgtggaaa
                                                                     1380
ctgaggtttg tgacaaggtt caatccctga tttctgtgac tccaaagtat gtgctgttat
                                                                     1440
ttaatgttta tgtattctct attatgaatt gttttcaagt tttttaaaaat atcactagct
                                                                     1500
agcctgtacg tttcttagga ggcaaaaaca attgccttaa attttgttat attttagtgc
                                                                     1560
cattttgcac ataggttata agcaacagat aatttctgta atctttagaa tatcgattaa
                                                                     1620
acttgttaaa atgtagatat tttgaaatct cacacaggac acctaaatta tgtraaatgt
                                                                     1680
tataaacttt atgatttaca ggggccctgg agatggaagt yctgaaaaaa tgtgccttta
                                                                     1740
ttcagtatta gtgcattatc agggattcca gatytcagtt aaaatgagag aatctgaatc
                                                                     1800
tctagscaat gatgagtgtt tctgaaattc agattcacca gaaagaaatt gaaagcaaag
                                                                     1860
agaagacagt gttgtcaaat tatcatataa ttcagctaaa aaaaaaatca tggtacttaa
gtgggagcta gagcacatca ctgcctttaa gaagatattt aggggaataa aagagktctg
                                                                     1920
                                                                     1980
ggacctcgga ggtgaaactg agagaaagac aaagggactt caaatcaagc atttgaaaga
                                                                     2040
gccaatgagg ggccagatgt ggtgactcac tcctgtaatc ccagcacttt aagacgccaa
                                                                     2070
ggcgggatcc catctcaaaa aaaaaaaaaa
<210> 1212
<211> 1259
<212> DNA
<213> Homo sapiens
<400> 1212
                                                                       60
ttttttttt ttttttt tttaaagtta taaaaatatt ttatttaaat gatacagaaa
aaaatgtata cttaaaagtg attaaaactt cacattagga aatgctaaaa acccagtaat
                                                                      120
gtacataatg ataaaatcta aagtgatgag aaaacataaa atattttcat ttggtcctgt
                                                                      180
cacctaacaa aactatcata aatatgagat tatagtaatt actaaagctg gttaaaggca
                                                                      240
catgacaaca taatteettt atacacatee agteatttta tacaaggaae tgetateeet
                                                                      300
taaatggaag agtgaactac ttgtttaaaa tattaacagt gcactatgta cctacaatga
                                                                      360
                                                                      420
aaccactttc tccaaagact caaacagatt aacattgcaa aatagtactt ctgtatcact
gacttctgaa aattttaata atttatgcat atgcaagtga aatataattt attctggttt
                                                                      480
                                                                      540
caaccaacag ttatacaaag tcacaatttt ccccaggaaa ccattcactt catagctgca
aaaacacact gtagcttttc tgttagggtc tgccatgctt tcagctagct ggatgtttaa
                                                                      600
ccattcactt caaatttaca tgtccagcca ggcacggtgg cgtgggcctg tagtcccaac
                                                                      660
tacttcgaag gctgaggcag gaggatcact tgatcccagg agttcaaaga cagcctgggc
                                                                      720
                                                                      780
aacatagaag accetgtete tteggaaate ateeaaggag tgtgataaae atgacaacee
ccataaactg ggtaaacaac aacaatggag tgaaaaacga ccacacatgc cataaagcaa
                                                                      840
                                                                      900
tqttqaaqca aattcctgct gcaataaagg aggcagtggt aatgggtatc aaggctggat
                                                                      960
acttgacatc atattctcca attccacaat accattccag gtagactatg cagtaaaatg
                                                                     1020
caattgataa actgacaagc aacaaggcac tgccacagag aaaccagctg ctagtgtgga
                                                                     1080
agttttcttt aagggtttta aagaagtcaa cataataggt cacaacaatg gatgccaaaa
tccagaatcc agaatggata ttaagtcttg gaagaggttt ctcctttttc tcaacagctg
                                                                     1140
                                                                     1200
tggaggtttc cggcccggcg tcaccctcgc ggtccagctg ggcctcggcg tccggcagga
                                                                     1259
ggaggaatcg ccgccggagc tgctgccggg cccgcgagga gtccatcttg gctcgtgcc
<210> 1213
<211> 1905
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (846)
```

<223> n equals a,t,g, or c

| <400> 1213 | | | | | | |
|-------------------------|------------|-------------|------------|-------------|-------------|------|
| | aaagggcagt | acagaaatca | accagcaccc | agtcacagtc | gaaggtgctt | 60 |
| ttacccttga | ccctccaaac | agagccaaac | agaagcttgc | acctattcct | gtggagctag | 120 |
| ccccaactgt | gggagtgtct | ataactctac | agagagaagg | catagactcc | cagtctttaa | 180 |
| ttgaattaaa | gacccagaat | gaacatgagc | cagagcattc | aaagaagaaa | gttttaaccc | 240 |
| ccataaagga | gaagacactt | actogoccaa | aatcaccaac | agtgtcccct | gttccatctc | 300 |
| acaaccagtc | acctccaaca | aaagatgatg | caacagaaag | tgaagtggaa | agtttacagt | 360 |
| atgataagga | caccaaacca | aatccaaaaq | ccagttcttc | tgtacctgct | tcactggccc | 420 |
| acctactosc | tacattccaa | tacttcagaa | gtagcttcag | sacagaagat | tgctgtacca | 480 |
| agetagegae | atcatttttq | cttttcaata | gacttaagga | gtatacatgc | cttggagatt | 540 |
| gcaacaccac | tcaactgtat | attaaggtac | tcatatccat | tctttggaag | tgcagctcct | 600 |
| attatracta | atcovcctot | agaagttcgg | aaaaacatgg | aagtttttct | tccccaqtct | 660 |
| tactatacat | ttgattttgc | aactatocct | catcagstgc | aagmcmcctt | cttaaggatt | 720 |
| cattactaa | ttgactatg | acecaegeee | waaatgagta | aagatttact | tctgggaatt | 780 |
| gggagaatgg | acctttctam | cwtcttatct | tcagaaaaaa | ctcattttt | aggttctaat | 840 |
| gcgagaaccc | attacatca | aacttacagt | gaaagtgtgc | ctgttatage | agcacaagga | 900 |
| tassatamas | gccggcgca | tetteettae | acagtgactg | tagaagatta | tggactagta | 960 |
| ccaaacanca | agatttttat | ctctcattca | tctcagggtg | tatctgccgt | acagcaaaag | 1020 |
| aaaacycycy | ttcctccac | accttatcct | tcagagatcc | agacagagcc | tcataaaaca | 1080 |
| ttagaataga | aaggaggagt | taaactaaaa | atgtggaagg | agatgcaaga | agatatattt | 1140 |
| ctayaataca | tasaacsass | agaactgggt | catatgcagg | ctcttgcaga | ggaatggaag | 1200 |
| gaaaaccagc | rgaagcagaa | atcactacta | aagaaaaagg | taactaaata | tactattcta | 1260 |
| aaaagggacc | ttaaaaaaa | totactagea | ttggagaagc | gagaggagga | gcttgctagt | 1320 |
| gaayyaaaac | naattaaaaa | agaaaaaaa | gaactgcaat | cagaacgtca | gcggaacctg | 1380 |
| gtggaatcag | agetteaaay | agaaaaaaaag | aaagaggact | gtattcacca | agtagaacta | 1440 |
| caayaactgc | aggactetat | actagagaca | gataaacacc | gcattcacca | acagettaat | 1500 |
| gaaaggttaa | adattadata | getegaagig | aaagagttcc | aacadttcaa | ddaccadcaa | 1560 |
| gatgetgaaa | acaaycacaa | tatagagtat | gaaataaatc | ttctcacctt | ggaaaaaggtt | 1620 |
| aacaacaaac | cagaaatccg | atatagaact | aagtctaaac | tocattacaa | acaacaataa | 1680 |
| gaacttgaaa | gaaagttgga | taggagagt | aaacaggcag | ccaaccaaa | ataaagatta | 1740 |
| ggacgagett | Lyadayaact | gtttaagactt | gagcacctgg | cactagagaaa | gacttctttc | 1800 |
| tactcacttg | actgaggage | tatatata | attattatta | atacactata | cttgattaaa | 1860 |
| actaccctct | aacttgtgtg | 222222222 | attattatta | togad | cccgaccaaa | 1905 |
| aatteaaage | atttaaayya | aaaaaaaaaa | aaaaaaaac | ccgag | | |
| <210> 1214 | | | | | | |
| <211> 1214 | | | | | | |
| <211> 114/ <212> DNA | | | | | | |
| <212> DNA <213> Homo | ganions | | | | | |
| <213> HOMO | saprens | | | | | |
| <400> 1214 | | | | | | |
| | | ttccgagtcc | atgcctgttt | tctccgccac | cggggaccta | 60 |
| tacaaaaacc | agggctgggc | cactgccact | ggacttacaa | gtgactgctg | aggctataca | 120 |
| ctagetteta | gaacaagata | accactgctg | ctgatggata | cttttccctc | actgccatgg | 180 |
| cacaccagte | atggatettg | taatcatqcc | aagagaatag | atacattatg | gacctcttgt | 240 |
| tettagatat | gggcctctca | acctaacaa | tgtggaaact | caaatttctc | gtcccactcc | 300 |
| aggttttggc | tagccaaccc | tacaggaaag | tggtttatag | gccattcata | cttaagttga | 360 |
| tcacttgccc | atggtggaca | tttttataat | ggtgatgtcc | attaaggaaa | ccagattttc | 420 |
| aattatttag | tgagagaaga | gttagagcaa | aagacagtgg | taaatgtttt | attccgtctc | 480 |
| catgaggaat | tgaaggagtt | ggtctccacc | tagagataca | tttgatttac | agcttaagta | 540 |
| attcagaggc | taagetetaa | actttttct | cycattgctg | gaatgattta | agcagaagtc | 600 |
| cttttakata | cttttaaaat | tokatette | caggagcccc | tcagattgta | ccttgctttc | 660 |
| tcaccaatag | acacetteee | gacacttttt | taatgttgta | gctgagcact | ttaacaagtt | 720 |
| gaggattcca | tatttcattc | ttagaacctt | ctttaataga | gggtcttccc | tcaacagcct | 780 |
| atacetetaa | tetacettte | accaccacto | ataactaata | tattggtcac | aatgactgga | 840 |
| atgtgactag | tgatctcagg | agatggcact | gtcctaaagt | gctgtcaggg | tggcaccact | 900 |
| actictictaea | caacttacct | tggtcagagg | gactcaggtt | tgggacagca | caagctgaag | 960 |
| actagagagt | aacttocata | gtaggaccat | acctcttcct | ttcccatccc | acccacatat | 1020 |
| gatagacagc | ccctctatta | agatatagaa | gggacagata | ctggaatcgg | gggtgggact | 1080 |
| tgcagttact | taaaattttt | taataaactq | tgccctgaaa | cctaaaaaaa | aaaaaaaaa | 1140 |
| - 3 3 0 | | | | | | |

<213> Homo sapiens

```
1147
actcgag
<210> 1215
<211> 998
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (358)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (481)
<223> n equals a,t,g, or c
<400> 1215
aattcggcag aggaatttta tgaataagta atgaagtcta attttccgtt atcatagcca
                                                                    60
ttggttaaaa atgcatgtct gttaggacat tgtaattatt ttgtattact taggaaaact
                                                                   120
tttatgattc tactctttta atttttttaa taattacttt atgacttctt cattagggat
                                                                   180
tctctcctcc agtgcgtacg cagatcttct gaaaaggaat ctgacaaatt tagttgctgc
                                                                   240
                                                                   300
atttttctaa attgctttca agactaccca gcacttcaga tacttttcat ggcccttttt
cccaaagtgt tctccaggat gcctttgatc tgcacgggca atcccattag cagtggangg
                                                                   360
cttaagttcc cacagaaact ctgccacaga ggcactgaca ccagaccagg cgtgatccct
                                                                   420
aacagcttgc tgtaccgact catatgaggg ctgtcttggt ccgtctcatt taaggtttgg
                                                                   480
ncttctccaa agwttagaca ccytgttttc gttcaacctt tgtttggctt tgaagcatca
                                                                   540
tgcacttggg tcttgaaatc ttgggctcac cgctgcttgt accagtatct tctaccctcc
                                                                   600
                                                                   660
ggttgtttgt ggccattatc aaacaaacac catgccaact aggtgtaaat gcagactgat
attctgaaga atccaggaag ggctgggcat ggtgcctcat tcctgtaatt ctagcacttt
                                                                   720
gggaggctga ggcaggagga tcgcttgagc ccaggagctt aagaccagct tagggaacat
                                                                   780
                                                                   840
900
acatgcctgt agtcccaccc actcgagagg ctgtgatggg agaatcaccc gaggctgggg
aggttgaggc cgcagtgagc cgagatcgag tcactgcact ccagcctgga caacagagtg
                                                                   960
                                                                   998
agaccctgtc tcaaaaaaaa aaaaaaaaa aaactcga
<210> 1216
<211> 810
<212> DNA
<213> Homo sapiens
<400> 1216
ggcgttcccg caaggtcgct ttgcagagcg ggagcgcgct taagtaacta gtccgtagtt
                                                                    60
                                                                   120
cgagggtgcg ccgtgtcctt ttgcgttggt accagcggcg acatgacggg gtacactccg
                                                                   180
gatgagaaac tgcggctgca gcagctgcga gagctgagaa ggcgatggct gaaggaccag
                                                                   240
gagctgagcc ctcgggagcc ggtgctgccc ccacagaaga tggggcctat ggagaaattc
                                                                   300
tggaataaat ttttggagaa taaatcccct tggaggaaaa tggaaaaacc atatggcata
gttgaaaaga agtccagaat attccctgta agtcttaaca cttctgattt tycttttgtt
                                                                   360
tattgttttt ctctttcctt ttcctccctt tccaagcaat tattagatta aaatgttctt
                                                                   420
480
caaaaaaaaa caggaagaaa taccgtgagg taacaattac agttcaaatg ggaagtgagc
                                                                   540
acatttattt tcaacctggc tgtaaaacgt gttttgtgac cttgattttc ctaaagggag
                                                                   600
ttgaaagtac caaaagtttt tcactgtgtc ctgtttcatg ttgggtaaag agcttagggc
                                                                   660
                                                                   720
atgagcctaa gcaaacatcc atgcatggtg acagcaactg aatttctgtt attaattcca
aactctcatg tcctatggct ttgtacctca ttttcaagat ttgaccttaa gttctccatc
                                                                   780
                                                                   810
 tgtgaattta atatccacta atgggtgttt
 <210> 1217
 <211> 436
 <212> DNA
```

```
<400> 1217
ggcacaggcc gggcacaccc acaggagagc aatggctgga gggtgacatg gactgcaggg
                                                                      60
tgtggccgcg gcagcccagc tcttaagggg acagcctggg aaaacagact tagggacaat
                                                                     120
gatcttgagc catgaaatga tgtccaatgc cccttgtgcc acctgacatc agcctgatta
                                                                     180
atgaacaaac agaagaggaa gcaggggacc tgtgtgtccc tctctctgct tttctgtctt
                                                                     240
tetetgtgee ecetetetta tgteteteae getgtetett gteettgttt ttaaetetga
                                                                     300
cacgccgtgg gaacttggct cacttcctag ggggaagctg tctggactgg cccagagatg
                                                                     360
420
                                                                     436
aaaaaaaaa aaaaaa
<210> 1218
<211> 3714
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (2324)
<223> n equals a,t,g, or c
<400> 1218
tgacttcacc tgaacaagta gccgactcag tgaaacgttt cagagtgcat tttrsccaaa
                                                                      60
tggcatttta gcagaggctg ttccatgcag agataaaagt attcgaatga gaacaagagt
                                                                     120
agcaggaaaa acgaaatyac ttgcaattat gccagatgag ctgaagcaca ttattggggc
                                                                     180
tgagacaaca cggaaaggta ttcttcgtgt ttttgaaatg tttcagcaca accaattaaa
                                                                     240
taggagaatg gtttatgtct tcttggaagg ctttttagaa accttatttc cacagtataa
                                                                     300
attccgtgaa cttttcaaca aactgcattc acggtcaaag cagatgcaga aatataaaca
                                                                     360
gaaacttcaa actactcaag cgccttcttt gcagaaaagg tgacactcca ctctatgaag
                                                                     420
ctggtgttca ttttgtccag gactaatggt atggacagat cttctggggc ttaactcaaa
                                                                     480
tactgttgtg tctgcaccag tcttttagtg tctcaaaata gattattaat acatccataa
                                                                     540
gtctgtggtt cttctcattc tcatctataa tccaccacta ccaagagaga tttctgtgtc
                                                                     600
                                                                      660
ttaaatgatt tggtgcatat tttgcaacat tgagagaaaa ctgcccccat ctcaagcaag
                                                                      720
aatggcgttg gtttcttcca tttcaaacta atcagcattc tccagcaatg acaaagtgcc
                                                                      780
agagtgtata tatgaaagct aaggaaagca caaaacaatg gttcagagat aaattggcta
atttgtttaa cagttggaga ctgtgcaatg tacgacttgg aggagtttgt ttggcataat
                                                                      840
gattttgtag gtctgtcagc attttgatat attgtggatt agccaggtga atgatccttg
                                                                      900
                                                                      960
aaacatctct ttcaggtctg gagaaagaga cagaatgccc ttaaagtgtg aaataacctt
atacctgaat tacagttttg tgatataaaa taaagctgag tataaaataa aaccaatcaa
                                                                     1020
acacagaatt tgattggatt tgttattcat tggtatacaa caatttttat tcttatgtgt
                                                                     1080
gctttaaggg ctgtgttttg ctcttagggt actcaatttt atgtttcctt ttggcattct
                                                                     1140
 ttgtgcaaaa agaagcatgt ggtggctctc atttaaattt caaaattatt agttttatct
                                                                     1200
ttaacagatt actgattata cagaagatat aatttattgg aagaactgcc aaatacattt
                                                                     1260
tgtccttcta aaaatatgga aatttaaata gtagtctgga aagttaccat atgataattt
                                                                     1320
 ttaattgtgt gatctagaca tgccttaggt aactgcagaa atagcaaatt aaatgattaa
                                                                     1380
 tgagcttatt agtcatagta aacatacaga ttcctaattc tatgacagtg tacatatatg
                                                                     1440
aaaataaatg atgaaaaaag aactataata tttttaaaaaa tatgctttta tttatatttc
                                                                     1500
 acataatgta aagttctaca aaataaagct agtaggcaag acccctcagt gtataccttt
                                                                     1560
 aaacccataa attaatttta tatcaataaa ataaaatact ttctctagtt ttggagcttc
                                                                     1620
 tgtatttcct atagttttct gactgtccat tttatccatc ttagaagtat tcacatccct
                                                                     1680
 tctatgcagg atttctgcat agttttaaat actttcattg cctaagggtt tgggtgtgtc
                                                                     1740
 agcttttttt gttttaaaaa tatttaacac taaaacctta aaataatgaa gctacttatc
                                                                     1800
                                                                     1860
 agaccactga gccaagatcc tggtattaaa agaaagtctg ggtgcttaag ataaagggac
 agagtattgg tatcccagtt atttgggagc tttaagattg gaacaagata tcactgtctt
                                                                     1920
                                                                     1980
 gttttcactt agatcctact tacaaagtga gggttattaa cagaataaag ccttccttta
                                                                     2040
 aagctttata ataatcatat ttattaataa tgctgttgtg catacttata gtatgcatat
 attcagcata tgttgcatgt cttcagaatt acataaaatg aaatcccttt cattgcaact
                                                                     2100
 tgcaagtgag aaaagateet tagtggetet ggtggargaa atagtattte ttetteteag
                                                                     2160
 ggtgtctccc tgccttggcc cctccctgag ccccaggctt taaaagtgaa aatgtttgaa
                                                                     2220
 acatgaaaca tgtctgtagg aagcatcagc atggccataa gtgcagtgat tttcatatat
                                                                     2280
 gcctctgccc atttcaaata tatttttgac atgaataaat ctancagtat acagaataat
                                                                     2340
```

```
tcatgtaaga ccctaacgtg tacatgtgaa aaagcatttc tatataatgt gaggagcact
                                                                     2400
ggccatcaat tagggaaata aaggtcatgt aatattgcaa attttcaaaa tagagccctg
                                                                     2460
caagataact gcaatcatac caaaaactat ttgagtaaat ggatttttaa agtaattttt
                                                                     2520
gtttagaaga gtttatattt cagaagcaga aaatgtcaaa tgatagtctt tgtaaatggt
                                                                     2580
ggtgcacctt ctctatgcac atctgtcttt tacatcagaa agagctgtgg tcatgctaaa
                                                                     2640
attagagata actttttgaa tgacttggtc aagctgtgtg taaaatattt aaccataagt
                                                                     2700
caagtacagt gtactatgtt taataaagtt acatttaatg catttattgc atatatgaat
                                                                     2760
atatacatga agaggcttta tgtcttctgg tatttgattt tgaatgtttt ttaagtcagt
                                                                      2820
ggtgccttta ggcaagaact ttcgaaatta atcattcttt gtgttttctg atttttcagg
                                                                      2880
taacatgtac actatttaga aaccatcata gtttattcac cttaaaaaat tgattgtatt
                                                                      2940
atttaaatat atcacttaga tgggcatttc ctataattag gatattccaa atagttgctg
                                                                      3000
aaatcaattg tgccattgac caatggatgc acttggttag ccttaatttt tttwaaaaaa
                                                                      3060
aaaaaaacaa aaactttctt gaatatttca gtttgttcat tttaagtttg tgctgctggt
                                                                      3120
atttgggaag aaaaatcaat cagttaagtg ctaccagaaa gtgtaccaat ttttataaaa
                                                                      3180
attaagaatg atataaattt cacaatctaa aattttaatt ttgtgcaata ttttcattta
                                                                      3240
atgcatgtgt atttgagtaa ttgtaagata aatgaatttt taattttttg agatgtagct
                                                                      3300
                                                                      3360
taaactgtct tcttaatcca acaacttaca ttccgttgtt gctgcatcct tttatttaag
                                                                      3420
gacttgtttt aaaagtcttt ttgtcactcc ttggaaaatt cttttattag tagtaaattt
                                                                      3480
tgcttttarg agcatggctc ctgtattaca agggaaaaaa tatgaagagc acattttagg
attataattg ttaaaagata atgtgtgcat atcattgtac agtaagtgtc aactgtgtgc
                                                                      3540
                                                                      3600
ctaactgttc tatcaatact ttctttcttt aacaaagaag aaacaacaat cagaatgtca
gttattttta ttcaactaaa aggattaaaa aatttatttg gtttgtgttc tgtccattag
                                                                      3660
                                                                      3714
aaaatactaa taaagtatta acaaacaaaa aaaaamaaaa aaaaaaaact cgag
<210> 1219
<211> 1263
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (184)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (1254)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (1255)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (1261)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (1262)
 <223> n equals a,t,g, or c
 <400> 1219
                                                                         60
 tggttactga gatggtgaaa accaggggag acctggggga catcacaagc ttggttccta
                                                                        120
 ccaggtttat ggagccgtac atctttggga gccgcctgga ccacgacatc atcgacctgg
 aacagacagc cacgcacctc cagctggcct tgaacttcac cgcccacatg gcctaccgca
                                                                        180
                                                                        240
 aggncatcat cttgtttata agccgcaacc ggcagttctc gtacctgatt gagaacatgg
 cccgtgactg tggcgagtac gcccacactc gctacttcag gggcggcatg ctgaccaacg
                                                                        300
 cgcgcctcct ctttggcccc acggtccgcc tgccggacct catcatcttc ctgcacacgc
                                                                        360
```

| tcaacaacat c | rtttgagcca | cacataacca | tgagagacgc | agccaagatg | aacatcccca | 420 |
|--------------|------------|------------|-------------|------------|------------|-------------|
| cagtgggcat c | | | | | | 480 |
| atgacgactc t | ccactaact | atacacctct | actgcaggct | cttccagacg | gccatcaccc | 540 |
| gggccaagga g | raageeggee | canattaana | ctctctatca | cctacagaag | cagaaggagc | 600 |
| ccggggacca g | raaaccaacc | caggingagg | agactaacat | gaggaggg | ctataatatt | 660 |
| cactctcctc c | gggccagcc | cacccccccg | acctatatata | actagaaata | cccttccca | 720 |
| cacteteete c | caaagcaaa | ccacagccaa | ttaattaata | geegggagee | agagtagaga | 780 |
| gccctgggtc a | ageggeatee | teagtegttg | ttacttactc | agetyatyte | acagigeaga | 840 |
| catccaccgt t | ccaccacag | aaccagtggc | tgageggaee | aacgttgcca | tgtgcgtttg | 900 |
| ctctgtgggg a | aacagagcac | agagggtgag | cgacatgtgc | agaacggccc | cttggctgca | |
| gttaggacct c | cagtggctgg | tatggccrag | ctgctagaag | atgctgctgt | ccctgtgatc | 960 1020 |
| ccagcagccc t | cccttcacc | gtgacccctg | acctttgtca | ggaaggtgca | gtttttcttc | |
| tcaatctaaa t | gcctttcag | gtgggccgct | tccttggcta | cctggttcca | gggggctgtt | 1080 |
| ttgtaatgag a | | | | | | 1140 |
| caggccagat g | | | | | | 1200 |
| aaaaaaaaaa a | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaggg | gggnnccccc | 1260 |
| nna | | | | | | 1263 |
| | | | | | | |
| <210> 1220 | | | | | | |
| <211> 1476 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo s | sapiens | | | | | |
| | | | | | | |
| <400> 1220 | | | | | | |
| ggcacgagcc g | паасасаааа | ataacaacaa | caacaacaac | caaacactcc | tgaagcagca | 60 |
| gttatggagc t | ttccctcada | accadaacca | gagcggctct | ttgactcgca | ccaacttcca | 120 |
| ggtgactgct t | tectectagg | catactacta | ctctacccc | cagtcagatt | ctacctcctc | 180 |
| gtcctgcgcc t | tettetee | gatccacgtc | ttcctaatca | actacacact | accadacado | 240 |
| gtccttcgca g | ratteetegg | acadaccata | tatacaatac | taggggggg | aacccaacsa | 300 |
| giccitigea g | ractegeage | tangagtata | aggatagta | tttccaacca | tataacacat | 360 |
| gaggactccg g | gaeteeggga | tttcattaga | agggcccca | ccccaacca | castactccc | 420 |
| ttcgaccaca a | acatagicaa | tityettace | accigiagea | ccccccacc | caacaycccc | 480 |
| cccagctttg t | tgtgctggtc | teggggette | atggagatga | acgggcgggg | ggagttggtg | 540 |
| gagtcactca a | agagattetg | tgcttccacg | aggetteece | ccactcctct | getgetatte | 600 |
| cctgaggaag a | aggccaccaa | tggccgggag | gggctcctgc | gcttcagttc | ctggccattt | |
| tctatccaag a | atgtggtaca | acctcttacc | ctgcaagttc | agagacccct | ggtetetgtg | 660 |
| acggtgtcag a | atgcctcctg | ggtctcagaa | ctgctgtggt | cacttttcgt | cccttcacg | 720 |
| gtgtatcaag t | | | | | | 780 |
| tttgcactcc g | | | | | | 840 |
| actccagctg a | | | | | | 900 |
| tcagcccagt (| | | | | | 960 |
| ctggctcaga (| | | | | | 1020 |
| ctggccaaga d | ctggctgtgt | agacttgact | atcactaatc | tgcttgaggg | ggccgtagct | 1080 |
| ttcatgcctg a | aagacatcac | caagggaact | cagtccctac | ccacagcctc | tgcctccaag | 1140 |
| tttcccagct o | ctggcccggt | gacccctcag | ccaacagccc | taacatttgc | caagtcttcc | 1200 |
| tgggcccggc a | | | | | | 1260 |
| agattcacag a | agagacgagc | ccaggaggct | gactgagctc | aaaggaacag | gatggcaccc | 1320 |
| agagccgcag (| gacggagact | gggggcagcc | ctcacccaac | tcacaacagg | ctggatgggt | 1380 |
| gggtggtaaa a | aagggaagga | tgaggctccc | ccaatgtcac | attaaattca | tggttttcat | 1440 |
| tcaaaaaaaa a | | | | | | 1476 |
| | | | | | | |
| <210> 1221 | | | | | | |
| <211> 475 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo s | sapiens | | | | | |
| -LIS- HOMO | | | | | | |
| <400> 1221 | | | | | | |
| ggcacgagct | tagaggagg | agactaggag | ttatgagagg | aaggetetet | atacctggct | 60 |
| cccagtgtt | ctaccactaa | cactgacgat | daddadccad | actttaaaa | gactttggaa | 120 |
| tcacccccc | | | | | | 180 |
| cctcagccag | | | | | | 240 |
| gggagctggg a | | | | | | 300 |
| gggagetggg a | accacatedg | ccayyccctg | tacatatata | cctccccac | aacctcacac | 360 |
| catggatggt (| yactaayycc | ccaaagtccc | Lycelettig | cccccaya | aaccccacag | 500 |
| | | | | | | |

```
420
ccaggccagc ccccagagca gagcctgtgt aaacatgccc aggaggggag gaggggttgc
tacatatgag aaacagttaa aaataaattt aaaaagcaaa aaaaaaaaa aaaaa
                                                                     475
<210> 1222
<211> 2708
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1953)
<223> n equals a,t,g, or c
<400> 1222
agcctctttg gctcaaaagg gtgkgttatg aacgaacctc cttcagtcca actatccaga
                                                                      60
                                                                     120
cgttcattct ctctgccatt tggcacgggg tatacccagg atattatcta acgtttctaa
                                                                     180
caggggtgtt aatgacatta gcagcaagag ctatgagaaa taactttaga cattatttca
                                                                     240
ttgaaccttc ccaactgaaa ttattttatg atgttataac atggatagta actcaagtag
                                                                     300
caataagtta cacagttgtg ccatttgtgc ttctttctat aaaaccatca ctcacgtttt
acagetectg gtattattge etgeacatte ttggtatett agtattattg ttgttgecag
                                                                     360
                                                                     420
tgaaaaaaac tcaaagaaga aagaatacac atgaaaacat tcagctctca caatccaaaa
                                                                     480
agtttgatga aggagaaaat tctttgggac agaacagttt ttctacaaca aacaatgttt
                                                                     540
gcaatcagaa tcaagaaata gcctcgagac attcatcact aaagcagtga tcgggaaggc
                                                                     600
tctgagggct gtttttttt tttgatgtta acagaaacca atcttagcac cttttcaagg
ggtttgagtt tgttggaaaa gcagttaact ggggggaaat ggacagttat agataaggaa
                                                                     660
                                                                     720
tttcctgtac accagattgg aaatggagtg aaacaagccc tcccatgcca tgtccccgtg
ggccacgcct tatgtaagaa tatttccata tttcagtggg cactcccaac ctcagcactt
                                                                     780
gtccgtaggg tcacacgcgt gccctgttgc tgaatgtatg ttgcgtatcc caaggcactg
                                                                     840
                                                                     900
aagaggtgga aaaataatcg tgtcaatctg gatgatagag agaaattaac ttttccaaat
                                                                     960
gaatgtcttg ccttaaaccc tctatttcct aaaatattgt tcctaaatgg tattttcaag
tgtaatattg tgagaacgct actgcagtag ttgatgttgt gtgctgtaaa ggattttagg
                                                                    1020
aggaatttga aacaggatat ttaagagtgt ggatattttt aaaatgcaat aaacatctca
                                                                    1080
                                                                    1140
qtatttqaaq qqttttctta aaqtatqtca aatqactaca atccataqtq aaactqtaaa
cagtaatgga cgccaaatta taggtagctg attttgctgg agagtttaat taccttgtgc
                                                                    1200
agtcaaagag cgcttccaga aggaatctct taaaacataa tgagaggttt ggtaatgtga
                                                                    1260
tattttaagc ttattctttt tcttaaaaga gagaggtgac gaaggaaggc aggaatgaag
                                                                    1320
aagcactgcg tggcctccgg tggaatgcac ggggcacagc cgcgactctg caggcagctt
                                                                    1380
ccccccatg ccagggctct gcgccgtcat gtgagactta aaaaaaaagt tgaatgactt
                                                                    1440
cgtgatactt tggacttcta aattaaattt atcaggcata aattatgtag aattagaggc
                                                                    1500
tttgaaaata atactggtag gttgctcaaa ggttttgaaa gagaaatcgc taggtaggtt
                                                                    1560
actatctggc taatccattt cttatccttg acaatttaat tcatatttgg gaaactttta
                                                                    1620
gggaaatgaa aaataaaagt cactgagtct gggtgacatt ttttaagaat aatataaatt
                                                                    1680
cagtttcaaa ctcttctcac attaaaattt tgctgtgaac tcttactaaa atgagtttta
                                                                    1740
rgttctgtaa gtggaaaaat gtgcttttat tttatgggcc atttttacca caactaatct
                                                                    1800
                                                                    1860
tgccttggat tactaagcat ctcctgcgat cccacagagg actgtggtgg ccacaggagc
traagcagaa gagtgggatt tratgccagg cagtggagtg gcctcagccc cagattgtac
                                                                    1920
ctcctgccct gtaggagggg agggggcaaa gcnttctgaa cttcaccttt gtttgaccta
                                                                    1980
                                                                    2040
tgtatggaac ttacttttac tttttgcctt aaatttttaa tgaaagcaaa ttttctgtga
                                                                    2100
tggggttete tetetettt tttegggggg tggagteaet aataaatttg caaatgaagt
taaagacaag gcaaccatct ggcttatgct atataatact tcatttaaag aagaaaggaa
                                                                    2160
                                                                    2220
aagcaaatgc acttgcagct tttgaggtct cagcaaaaat gggcatgtgt cttttttgaa
                                                                    2280
gtttagaaat atcctaatct atttttattt atctaaaagt aagtgttttc cggctgataa
ggctaaccct acccaggaaa ggattgataa ctaaataaat ttcctctgtt ttcccatgca
                                                                    2340
ttgaaattat gttggctgag ccactgcacc cagcttttgc tggaagtttg attagcttgg
                                                                    2400
gttgaatctg tagaacaagt taagaagaac tgacatcttg acaatatgaa gtcttcctat
                                                                    2460
                                                                    2520
tcatgaaaat ggaatatctt ttcatttatg tagttcttct ttgataacat cagacttttc
                                                                    2580
ctcttgtaaa tcttgtaggt atttcattca tttataccca tttcattttg agggggacta
                                                                    2640
atgtaaatgg taattttgtt tgtttgtttg tttttgaaac ggagttcact cttgtcgcca
2700
aactcgag
                                                                    2708
```

```
<210> 1223
<211> 1314
<212> DNA
<213> Homo sapiens
<400> 1223
tcgacccacg cgtccgggta attgtttgaa atctaaaatg tcaactttct atattttcat
                                                                    60
ttttatgaac aacactgttc gtaaaggcag taatgcttcg tgtaattact ggtacataaa
                                                                   120
agtctgattt tgaaagtcac tgtaaactaa gcctgttttc tgcctttctt tctagtaaca
                                                                   180
accettcage agegtetgtt acageetgae ttecagecag tetgtgette acagetetat
                                                                   240
cctcgccaca aacatcttct gatcaaacgg tccctgcgct gccgtgtaag tattccattc
                                                                   300
tgtagactga ccatttgtac aagaggaaag caaaaataaa tgtggctggt gtctgactaa
                                                                   360
tgtcaaaacc tttggaatgt attaaataca gaaaatactt gtagagaaca tactaattgc
                                                                   420
caggcactat tttaaatgct ttcaatataa acagctctta caactctgtg aggtaggtac
                                                                   480
                                                                   540
tactgttaaa cctgttttac aaatgtagaa aatgaagtat ctgaaggtta agtacatagg
gttaacccct aaaagaatag tgaaagagtg tgaactttta ggctagtgtt caggctcagg
                                                                   600
gaggaccaat aaaaaataat caatttaaaa gaaagcaaga aaaatcagca aaatccaggc
                                                                   660
                                                                   720
tctggtaatc tacagaacaa atgacagagt ttcttcaata aataaattgt aaaaacaaaa
                                                                   780
tggaaaagaa accttttaga ggagtactat ccaacagaac tttctatggg tgatggaagt
                                                                   840
atyctgtgtc tgtacagtcc ccgcatgata gccactaggc acatgtggct cttgagcaca
                                                                   900
tgaaatgtga tagtgcagct gaggtactga gtcagtcttt aatttcattt aaataaccac
                                                                   960
atgtcgctag tggctaatgt tacttaatca ttctctagat tagaagagac ttaaagttta
                                                                  1020
ccaaacacaa tgtatagagt ttacgtagat tcggattcaa acaaaacaga aagaaagggc
ccaggggagg agggaagaag ggaaagagga aagaaggaaa gaaaaatttg tgaaatcttt
                                                                  1080
                                                                  1140
gagaaaattt aaacactggt agcattttcg atgctattaa aaaactattg ggcagggcac
agtgacatgc acttgtagtc ccagctactc tggaggctga ggcaggagaa tcccttgagc
                                                                  1200
                                                                  1260
ctgaggagtt tgagactgta gtgtgtgatg atggtgcctg tgaatagcca ctgcactcca
                                                                  1314
<210> 1224
<211> 1022
<212> DNA
<213> Homo sapiens
<400> 1224
                                                                    60
ccacgcgtcc gggagcgcag actgtgtccc tgacaatggg aacagccgac agtgatgaga
tggccccgga ggccccacag cacacccaca tcgatgtgca catccaccag gagtctgccc
                                                                   120
tggccaaget cetgeteace tgetgetetg egetgeggee eegggeeace caggecaggg
                                                                   180
gcagcagccg gctgctggtg gcctcgtggg tgatgcagat cgtgctgggg atcttgagtg
                                                                   240
cagtcctagg aggatttttc tacatccgcg actacaccct cctcgtcacc tcgggagctg
                                                                   300
ccatctggac aggggctgtg gctgtgctgg ctggagctgc tgccttcatt tacgagaaac
                                                                   360
ggggtggtac atactgggcc ctgctgagga ctctgctagc gctggcagct ttctccacag
                                                                   420
ccatcgctgc cctcaaactt tggaatgaag atttccgata tggctactct tattacaaca
                                                                   480
gtgcctgccg catctccagc tcgagtgact ggaacactcc agcccccact cagagtccag
                                                                   540
aagaagtcag aaggctacac ctatgtacct ccttcatgga catgctgaag gccttgttca
                                                                   600
gaaccettca ggccatgete ttgggtgtet ggattetget gettetggea tetetggeee
                                                                   660
ctctgtggct gtactgctgg agaatgttcc caaccaaagg gaaaagagac cagaaggaaa
                                                                   720
tgttggaagt gagtggaatc tagccatgcc tctcctgatt attagtgcct ggtgcttctg
                                                                   780
caccgggcgt ccctgcatct gactgctgga agaagaacca gactgaggaa aagaggctct
                                                                   840
tcaacagccc cagttatcct ggccccatga ccgtggccac agccctgctc cagcagcact
                                                                   900
tgcccattcc ttacacccct tccccatcct gctccgcttc atgtcccctc ctgagtagtc
                                                                   960
                                                                  1020
1022
aa
<210> 1225
<211> 2820
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
```

```
<222> (68)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2818)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2820)
<223> n equals a,t,g, or c
<400> 1225
aattcggcac gagccgcggt ctccggaggc tttatctgca gtgctgcctg cccgctgggt
                                                                     60
ggtactgnta cctagtgggt yttggggacc ttcgaaatcg ccgccgctct cacaatggct
                                                                    120
                                                                    180
tgggtccaga ctgcgccaca gcctctcggg agacgtgggc cctcggaacc tttttagtgc
cggactccgg gccgcagaga ttcccgcggc agcaggtatc acaggtggca gggactcagc
                                                                    240
tcggaattct gtatagaaaa agcacctgga tcccagtctt tcaatggctt caagacaacc
                                                                    300
agaagtgcct gctcttgagg ctagtgcgcc tctaggcaag atgtccctgc ccatcgggat
                                                                    360
ataccgccgg gcagtcagct atgatgatac cctcgaggac cctgcgccca tgactcctcc
                                                                    420
                                                                    480
tccatcggac atgggcagcg tcccttggaa gccagtgatt ccagagcgca agtatcagca
cctcgccaag gtggaggaag gagaggccag tctaccctcc cctgccatga ccctgtcatc
                                                                    540
agccattgac agtgtggaca aggtcccagt ggtgaaggct aaagctaccc atgtcatcat
                                                                    600
gaattetetg atcacaaaac agacccagga aagcatteag cattttgage gacaggeagg
                                                                    660
gctgagagat gctggctaca caccccacaa gggcctcacc accgaggaga ccaagtacct
                                                                    720
                                                                    780
tcgagtggcc gaagcactcc acaaactaaa gttacagagt ggagaggtaa caaaagaaga
                                                                    840
gaggcageet geateageee agteeaceee aageaceaet eegeaetett eacetaagea
gaggcccagg ggctggttca cttctggttc ttccacagcc ttacctggcc caaatcctag
                                                                    900
                                                                    960
caccatggac tctggaagtg gggataagga cagaaacttg tcagataagt ggagcctctt
                                                                   1020
tggaccgaga tcccttcaga agtacgattc tggaagtttt gccacccagg cctaccgagg
agcccagaag ccctctccat tggaactgat acgtgcccag gccaaccgaa tggctgaaga
                                                                   1080
                                                                   1140
tccagcagcc ttgaagcccc ccaagatgga catcccagtg atggaaggaa agaaacagcc
                                                                   1200
accacgggcc cataacctca aaccccgtga cctgaatgtg ctcacaccca ctggcttcta
gagccctctt tccagggatt ctggtaaagg tggtttcttg catcccactc cccttttacc
                                                                   1260
ttggctttga cataggaaag gtatatttaa aaacttaatc agctgggcgt ggtggctcac
                                                                   1320
                                                                   1380
gcctgtaatc ccagcacttt gggaggccaa ggtaggtgga tacctgaggt caggagttca
agaccagcct ggccaacatg gtgaaacccc gtctctacta aaaatacaaa aattagctgg
                                                                   1440
gcgtggtggt gggcgcctgt agtcccagct acttgggagg ctgaggcagg agaatcgcct
                                                                   1500
gaacccagga agcagatgtt ggaccgagct gagatcatgc cattacactc cagcctgggc
                                                                   1560
                                                                   1620
gacagaacga gacgccatca ataaataaat aaataaagta aagtaaaaaa cctattaaat
                                                                   1680
tgaggctaga gctggagatg taattggttt ttgagaaaca ttagtataaa gcttgccctt
                                                                   1740
gttgtgtgga agaagccatt ttgtactgct ttaaagttag actaatattc tcagcacggg
tgtatgggga cctcattacc tattttttc atcatttacc ctaggtaaga actttgatca
                                                                   1800
ctgcttacta ggtaaagaat gtttgtactg ttccaaaacc caggcttctt tattccttta
                                                                   1860
ccactatcca tgtgagcatt gacaaatcat ggcttagagg tgctcactga ctcgctaaga
                                                                   1920
cgactttggc cctgttgatg actggtgctg tgctccagcc ttatcagtta ggggacccaa
                                                                   1980
ggtttgtttg ggacctgggt acaggtaaaa gccagacttg gcagggaccc ctctttctag
                                                                   2040
gctgaacctt gagtccccct gctttttggc agacctaatg gatcactgtc ttgcagctag
                                                                   2100
ttcttcatgt ggggcctctt aggccagtgc cggaggaggc atgctcctct ttctatgcca
                                                                   2160
cagaacaaac actactctag cagagccttt cttgcacttt aaagtgagat taatttagct
                                                                   2220
                                                                   2280
gtaatttggt taaaaacttc ctaagagaga aaattaagtc tactgatttg gtataggtaa
atggacatta aactttttta aagtaaagga gatggtagat accgttagat tatagtcttg
                                                                   2340
aggttcatgt gaagccagtg gtgttaactt actttgattt ccttgttcag gtcagggcct
                                                                   2400
                                                                   2460
ggaacgcctg tgcggggagg tcactcaatt caaaattttc tgtatgaaag catttttcac
caaaatgagc ctcatccctt tatgcaacac ataaccttac tgagggaggg aaatacrgaa
                                                                   2520
                                                                   2580
gccacctttt tatttctctt cactgtgtac aagttcactt gttgtcttga acactgtctc
                                                                   2640
aaatacctgc tttttgtttt ggatagtacc ttgtctgtat aagaagctgg cctttccata
                                                                   2700
gagaggccct ggagtctaaa attatgagaa caattaattt atttgtgtct tctattatga
                                                                   2760
 2820
```

| <210> 1226 | | | | | | |
|--------------|--------------|--------------------------|-------------|------------|-------------|------|
| <211> 787 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| 1525 | 20.5.2.2.2 | | | | | |
| <400> 1226 | | | | | | |
| | gcatacccac | caggcatctt | ataagccatt | gttgaagcaa | gttgtggagg | 60 |
| aaatatttca | tcccgagagg | ccagattccg | ttgatattga | acacatgtct | tcaggcctca | 120 |
| | | tttagcatgt | | | | 180 |
| actaccccct | cctgatcctc | tttgtggtag | gtggggtcac | agtctctgaa | gtgaaaatgg | 240 |
| tcaaagatct | tgtggcatca | ttgaagccag | gaacccaggt | aatcgtgctg | tccacacgac | 300 |
| tcctgaagcc | acttaacatt | cctgagctgt | tatttgcaac | tgaccgactg | catccagacc | 360 |
| ttaacttcta | agcatccgct | aagaagataa | gacctactca | agctggaaat | gccgatgcaa | 420 |
| ttttctgcca | ccactccaaa | tactcctcca | caaccagcgt | ccctgtcact | aattgcgaga | 480 |
| atgatggaat | tctgcctgaa | gggtcttgat | acctactcag | tgaggtactt | tgcttggatt | 540 |
| gctgtgattc | ttaaaaaaaa | aaaaaaaag | tttttttatt | ttcctgaagg | cgacagtctg | 600 |
| tcttttggcg | agtccaatta | gtgatcgttt | ccatttatcc | ttaaccctct | gtttgtgatc | 660 |
| ttcctgattc | cacctacaag | ttcattagtt | ctaaataaaa | gcctgttggc | aagtgaaaaa | 720 |
| aaaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | 780 |
| aaaaaaa | | | | | | 787 |
| | | | | | | |
| <210> 1227 | | | | | | |
| <211> 2638 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1227 | | | | | | 60 |
| cccacgcgtc | cggaggtcta | cagtatttgt | gttggcatag | tttttgtaaa | aaaaaagatt | 120 |
| aaaaaatatc | aggatggtgg | aaaaactaga | tetgtgtate | tetgttttgg | tatttttaa | 180 |
| ttcagtatct | tctagcaatg | gtttttctct | gttgatctac | cgtagtatee | tatttttaag | 240 |
| tttattttat | ttttaaggag | tattgtcatc | acttttcaag | gtgtettgae | ggaattagag | 300 |
| agtatatata | ttcaggactt | taaaaaatag | cagtacacat | ttaacagtag | tttatata | 360 |
| caaaatgatt | tactttgaga | tttgaataat | ttgcatagca | gtaaaatgtg | tetagagaatt | 420 |
| catacaaata | gaaaaatgac | ccagtatctt | aattgatact | tactggagag | natcagaact | 480 |
| acccagcagc | tcttacagaa | tgccataaat | cctttaagac | ctanattttt | ggagatatga | 540 |
| ttgaagtaat | gttwctgatt | tactgttaaa | agttgctgag | tagatagaga | tagtatgata | 600 |
| tttatgcctg | cetgtteeet | tatgacagtg tgatgagaag | taggeettett | gatgetet | actcaattta | 660 |
| accatgggtt | ctgttttagt | atttttaggg | gtgtcccat | gaatgeetet | caactcattc | 720 |
| tttttattt | actttatttt | agtgctggga | ttagagggat | gaggaggag | acctaactet | 780 |
| teetgettee | accicccac | gtgccatcag | tcacaggcac | ttacatottt | agcatattgt | 840 |
| cigiliciti | cagigietee | cccacgagat | atttttaara | aaaaaattaa | caaaagtaca | 900 |
| tatatttta | gggaggtate | ccttagaaaa | cctaatgtgt | actoctattt | ttaaaaccaa | 960 |
| aaagagaga | cataeccata | cgtaaagcat | ttttcttacc | ctttcctttc | tcttgatctg | 1020 |
| ttaatgagacag | casaactacc | agactcaaaa | tactctacta | ttgtgctgaa | agaaatacaa | 1080 |
| tttaatgagaa | acaaaattta | aaaatataac | tcagctgtct | tttaaaagag | ttatattatt | 1140 |
| atctagactge | ctattaggag | tctttttca | gagcaaattt | taacagctag | ttataaataa | 1200 |
| | | taaaatctta | | | | 1260 |
| caddaddad | atttatatac | cttcttcagt | agtettaatt | gaccttttct | tcctatttga | 1320 |
| gactaaagta | gtatcagtat | tctaattttc | aggaaatatg | tactatatag | ttttaaaaga | 1380 |
| | | catccaagca | | | | 1440 |
| tacactttto | cctttatcac | ataatattca | ttgtagagca | ttgtgcaggt | ccaagaatag | 1500 |
| agetgeteaa | aatctttgtg | gtagtttcct | tagtttttgt | aacctgaggc | atatgttcca | 1560 |
| dadaacadd | atatttotot | ggtccagtga | ccttaataat | catagtcata | attgaaagat | 1620 |
| acctataaca | tacttaaate | agcattotca | actgatttgt | tgttgtatta | ttttcacttc | 1680 |
| ttagatctat | gtagtagttg | taataacaaa | tatttaaata | gctattttt | tgatgccatt | 1740 |
| aaaaaaatca | tactctggc | ttttttcccc | cttactqttq | tttcccagat | cttttaaaaa | 1800 |
| ttcatcccat | atccagaaag | taccagttat | aaagattgct | gaccaagcaa | agttttgcat | 1860 |
| caaaqtqtca | cctcattqct | ctgaccaaag | actgactgtt | gtggttttaa | ctcctctctg | 1920 |
| taaagcattt | tgcattttcc | ccaagctcct | ttctgaaaga | agacccagtg | cagagcggcc | 1980 |
| 3 | - | - | | | | |

```
tttactttca atttctactg ctgaatagac tacttagaga aaatgtgagt ttcagtgtga
                                                                   2040
                                                                   2100
acagaatgga ttaggatgac gagtttgatg ggcattttca gtactgtatc taagaaaaaa
                                                                   2160
aaaatagcac agctaggagc ctctgacatt gtctggtgtt ttacgtggtc tgttcatcaa
                                                                   2220
aattcccctt ttcagttttt aagaatgttc gtctaacaga agaaaatgct gtaaatattt
gtaacaacat ttttttaac aaggccaaaa aagaaaaaaa ggtttttggg aacaaatgaa
                                                                   2280
cttataaagt ggttttatat aaaacatcaa ttgtcttgta tattttggat aagcagcagt
                                                                   2340
accagettte atttgtaaca gtetgtggea ttggraaaaa aggagtetgt gattgttgaa
                                                                   2400
gtgaattatg ttataaatgc aaagagaaga taaaatatta aaaaacatat tttctaaatg
                                                                   2460
cgtagtgcat ggttaattca agcttctgta cactacagta tattccattt tcgttcagtt
                                                                   2520
tgtatatttg ctgactatta cttgatatct ctaatctctt ttcctaacaa atatagcatt
                                                                   2580
                                                                   2638
gtagcatgcc ttttaataaa tgtcatgaca tctgtactct cttaaaaaaaa aaaaaaaa
<210> 1228
<211> 787
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (4)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (11)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (13)
<223> n equals a,t,g, or c
<400> 1228
                                                                     60
agangggaaa nentggtact ccgtgcaggt accggtccgg aattcccggg tcgacccacg
cgtcmgacag tccacagctg aagagcaagg tttcgtggca gcacggcccg gcccctcacc
                                                                    120
ctctgtcccc acgaggggac ccatgggggc tgtctttgca gggcacagat gaccaaagtc
                                                                    180
ccttcctgct tcctgttacc tgtcttgctc ctggggagaa agaggggcct gatgagactc
                                                                    240
cactcaggtg cacacatcac caggtgcatc tgcaggcacc gggctggctg cttgcagcca
                                                                    300
ggagaaggtc agcgagaagg agtgtatgag tgtgagtgtg tgtgcatgga agttggggca
                                                                    360
ctgggcgtct gactccctcc ccacccaaga gaggaaggac ccctcaccac ccccactggc
                                                                    420
gagacagttt actttgccga cttgccatgt ttttgccaaa accaagattt tgaaggaaat
                                                                    480
gagtggccag cgccagggcc cagccatgtg gcctgcccag cctcaatgtc acttggyggc
                                                                    540
ggggtggggt gggggtgggc agcagcatcc cagccttgag atgcttcact ttccttctct
                                                                     600
gtaaccagac tttgaaaaat tgttcgtttc atcaggctct gttcctcaat ggccttttgc
                                                                     660
tacgtgcctc ccgagaaatt tgtctttttg tataaatgac aaagtgttga aaatgtattt
                                                                    720
                                                                    780
787
aaaaaat
<210> 1229
<211> 799
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (4)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (11)
```

```
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (13)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (779)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (793)
<223> n equals a,t,g, or c
<400> 1229
agangggaaa nentggtaet eegtgeaggt aceggteegg aatteeeggg tegaceeaeg
                                                                     60
                                                                    120
ggcgtcaggg gtgcacagtc cacagctgaa gagcaaggtt tcgtggcagc acggcccggc
                                                                    180
ccctcaccct ctgtccccac gaggggaccc atgggggctg tctttgcagg gcacagatga
                                                                    240
ccaaagtccc ttcctgcttc ctgttacctg tcttgctcct ggggagaaag aggggcctga
tgagactcca ctcaggtgca cacatcacca ggtgcatctg caggcaccgg gctggctgct
                                                                    300
tgcagccagg agaaggtcag cgagaaggag tgtatgagtg tgagtgtgtg tgcatggaag
                                                                    360
ttggggcact gggcgtctga ctccctcccc acccaagaga ggaaggaccc ctcaccaccc
                                                                    420
ccactggcga gacagtttac tttgccgact tgccatgttt ttgccaaaac caagattttg
                                                                    480
aaggaaatga gtggccagcg ccagggccca ggccatgtgg cctgcccagc ctcaatgtca
                                                                    540
                                                                    600
cttggyggcg gggtgggtg ggggtgggca gcagcatccc agccttgaga tgcttcactt
                                                                    660
tecttetetg taaccagaet tigaaaaatt gitegittea teaggetetg tiecteaatg
gccttttgct acgtgcctcc cgagaaattt gtctttttgt ataaatgaca aagtgttgaa
                                                                    720
                                                                    780
799
gccgttttaa agnatccaa
<210> 1230
<211> 1726
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1695)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1707)
<223> n equals a,t,g, or c
<220>
<221> SITE
 <222> (1710)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (1724)
 <223> n equals a,t,g, or c
 <400> 1230
                                                                     60
 gtcatggcgg cggccgccc aatgccggag gtckgcccct gagacagcgg gttccgccga
 agctccgctg cagtacagcc tgctcctgca gtacctggtg ggtgacaagc gtcagccccg
                                                                     120
```

```
gctcctggag cctgggagcc tgggcgggat cccaagtcca gccaagagtg aggagcagaa
                                                                    180
gatgatcgag aaggcgatgg aaagctgcgc tttcaaggct gcgctggcct gcgtgggagg
                                                                    240
atttgtctta ggaggtgcat ttggggtgtt taccgctggc atcgatacca acgtgggctt
                                                                    300
tgaccctaag gatccttacc gtacaccgac tgcaaaagaa gtgctgaaag acatggggca
                                                                    360
gagaggaatg teetatgeea aaaatttege cattgtggga geeatgtttt ettgtaetga
                                                                    420
gtgtttgata gaatcttacc ggggaacatc agactggaag aacagtgtca tcagtggctg
                                                                     480
catcacggga ggagctattg gtttcagagc tggcttaaag gctggggcca ttggttgtgg
                                                                    540
aggttttgct gctttctctg ctgcgattga ttattacctc cggtgagagt aattgcctgc
                                                                     600
agggaaggat gatgccagcc ccggatccgg gctgctctct ggaggacagt ttctgtacca
                                                                     660
caccagggcc ttgcttcagg gcctgaagac attcattttc cctcatgtcg ttggtattct
                                                                     720
ragggagetg cetggettet etgeeteeag cetttggggt agceacactt tgetgeteet
                                                                     780
ggactccagc cagccttcac agaggacgtc ccgtgccaga ttctctcaca gcagatcggg
                                                                     840
agacaggatg ttgacatata ggaattcagc tccacaaagc ttcaggcctg accacagctg
                                                                     900
gccctctagg ttgtttggtg ttgtgggcac agaggtgaca gtgtctctgc aggcactcag
                                                                     960
gaagctgttc taccttggaa ctccatgcaa ctatccgtct cgaataccag ggcagggcaa
                                                                    1020
ggcggactga tgccgtccaa ccaattatct cacttgtttt gtgttctgtc atccttgttt
                                                                    1080
tttttttaaa aatacactcc cctccccac cgccacacac cttacagttc aaaaggttgg
                                                                    1140
tttatttgta ttttattttc aaattcccta ttccaaaaat agtgccgggt ggcccaaaga
                                                                    1200
taacatctga agggaaagaa tgagaaagct cccagggaag cgggggatgg ggcgctgagg
                                                                    1260
cagggttgtt agaggactgt gtcatcctca ccaagctcat tacatctgcc agggcctgcc
                                                                    1320
tcaagaagcc cagcccagcc ttttcctggg atgcagtgaa atcccatcca tgaactcgat
                                                                    1380
gggcccctcc tgtgccggcc gagaggcaca cactgccttc acgacgtgac tgctggacct
                                                                    1440
ggccgagctt gaggccacat gtgaagggtc ctgctgtggt catcttggtg actcggtcac
                                                                    1500
agcagetact ggccaagate agacgteget gaggggetgt teaccaceat cetegttete
                                                                    1560
cagggtcaag gaagtgtttt aacatgtcgt gttttcgact tgaccttgtg gtattttct
                                                                    1620
1680
                                                                    1726
aaaaaaaaa aaccnggggg ggggccnggn accaaattcc cccnaa
 <210> 1231
 <211> 936
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> SITE
 <222> (168)
 <223> n equals a,t,g, or c
 <400> 1231
 gaaataatgt catgcataat acattcttca acactatact aattactaag cacctaatat
                                                                       60
 attgttattt tgtttgtttt ttaaactgca tattttgtca gtgtggcatc tcttgtctgt
                                                                      120
 gaaatattcc tttaacacat gtggtgtatt ttctcaccta cgtatgtntc ctcttcctaa
                                                                      180
 gtagtttaaa acacacaca gcgcgcgcgc gctgtgcaca tgcttattca ttgactaagt
                                                                      240
 tatccatgaa cctgtcattt ctgtcttctg gagcaacatg gaatctcata tttctatctt
                                                                      300
 aatcacatat gtttaatttt gcctttgttt tgtggtctgt gggtacattt gttattttta
                                                                      360
 gtatcaagtc atttggctaa atcatattaa attgcaatca cctaaaatcc cctggttatt
                                                                      420
 ttgacttaaa tgactgtcat ctttggtttc ccttacttag aacgtcacac agttaatttt
                                                                      480
 ttttttcaac ctaatggcaa gtgtgtgtgt gtgttcttgg agtagttctg ctggctatga
                                                                      540
 agagtatgta gtaatatgct aaagctttgt aaactcttct tttgttgttt tggaagatgg
                                                                      600
 agtgttgctc tgttgcccag gctggagtgc agtgatgtga ttttggctca ctagagtctc
                                                                      660
 caccttctgg gctcaagcag tcctctcacc tcagcctccc tggtttgtgg aactacaggg
                                                                      720
 gcatgccagc atgcccggat aatttttgta ttttttttt tttgtagata cagagtctca
                                                                      780
 ctatgttgcc caggctagtc tcaaactcct gagctcaagc agtcctcctg cctcagcttc
                                                                      840
 ctgaagtgtt gggattacag gcatgagcca ttgcacctgg ccctaaattt taacagatac
                                                                      900
                                                                      936
 aaaactataa gtttatactt aaaaaaaaaa aaaaaa
 <210> 1232
  <211> 698
  <212> DNA
  <213> Homo sapiens
```

```
<400> 1232
                                                                  60
gcttctttaa gattcgtctc tgggaagaga tttacccagt agagatcaga gccggacatt
                                                                 120
ttattgtttt ccaagtttga ccttttcatt tcaggagcat caagcatgaa gagccaatcc
agtttaagtg tgggcatctt gagagtaaca ctgtgtcttg ttccttcttg tgttcctgct
                                                                 180
                                                                 240
attgactgca atgctcagta aatgtttcag gcatccacga atgaatgatt gaacaaatca
acaattaatc aattaataaa tgaaagctat catcatcagg tggaaataat gcttttaagt
                                                                 300
aagactaagg gcttttatca ctacagagca taatagaaag gaaacaagcc aattaataag
                                                                 360
aaataatttt gcttaaaaaa taatttttca ggcctggctc ggtggcctca catctgtaat
                                                                 420
tccagcactt tgggaggcca aggcaggagg atcacttgag cccaggagtc tgagaccacc
                                                                 480
ctgggcaaca tggtgaaacc ctatctctac maaaaatwca aaaaattagc cgggtgtkgt
                                                                 540
ggtgcgtgcc tgtagtccca gctactcagg aggctgaggt gagaggatca cttgagcccg
                                                                 600
ggaggtcgag gctgcaatga gccatagtcg ccaccgcatt ccagcctggg tgacagagtg
                                                                 660
                                                                 698
agaccttgcc tcgaaaaaaa aaaaaaaagg gcggccgc
<210> 1233
<211> 903
<212> DNA
<213> Homo sapiens
<400> 1233
ccgggtcgac ccacgcgtcc gctgcatcca aggaactagc ttctaaaaaa tccctgccta
                                                                  60
tgaattatta cacagtattc taccatgttc aagaacaact acctagagac tgtttcgtgg
                                                                 120
taagtgaagg agcaaatact atggacattg gacggactgt gcttcagaac taccttcctc
                                                                 180
gtcacaggct tgatgctggt actttcggaa caatgggagt tggtttggga tttgctattg
                                                                 240
cagctgccgt ggtggctaaa gatagaagcc ctgggcaatg gatcatctgt gtggaaggag
                                                                 300
acagtgcatt tgggttttct ggcatggagg tagaaaccat ctgcaggtac aacttgccaa
                                                                 360
tcatactgtt ggtagtgaat aacaatggaa tttaccaagg ttttgataca gatacttgga
                                                                  420
aagaaatgtt aaaatttcaa gatgctactg cagtggtccc tccaatgtgt ttgctgccaa
                                                                  480
attcacatta tgagcaagtc atgactgcat ttggaggcaa agggtatttt gtacaaacac
                                                                  540
cagaagaact ccaaaaatcc ctgaggcaga gcctagcaga cacaactaaa ccttctctta
                                                                  600
tcaacatcat gattgagcca caagccacac ggaaggccca ggattttcat tggctgaccc
                                                                  660
gctctaatat gtaaataaag acgccagttg gtggtcttga gttttctctt tcttgcaaga
                                                                  720
780
                                                                  840
900
                                                                  903
 <210> 1234
 <211> 1971
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> SITE
 <222> (4)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (1270)
 <223> n equals a,t,g, or c
 <400> 1234
 taanccaaga ttgcatcatt gcaatgccag cctgggaaca gagcaagacc ctgtctcaag
                                                                   60
 ggaggaaaaa ataaaaaaat aaataaaaat ttaaaaaaag aacacttgaa gttactcaga
                                                                  120
 tcaggactca tgcagagaaa agccaacagg agcaacaccc cacattaggg gaggaagaca
                                                                  180
 cctggggatt cactgacttc agttgtgtga attttaccct atgaccttgc ttgctttatg
                                                                  240
                                                                  300
 agacagcaga ggtggccaag gtcaatccta ctgctctgtg gtgaactctg cttttctctc
 gttaccatag gtaaagggtc atgctcctat gtaagccttc ctgttcccca gtcatttgtg
                                                                  360
 cacggggtag gccatcatct cctgcctatt caagggaatg actagtcctg tcttctgtat
                                                                  420
 cctcagtcac caacttctca gttagtgttg aaccaagcct atgttcaaaa catgactgag
                                                                  480
```

| acagacctca | atccatagag | atttatttag | ccaaggtcca | aggacacatc | taggaaaaaa | 540 |
|------------|--------------------------|--------------|--------------|--------------|--------------|------|
| taccccatca | caggaggatc | tacaccttct | amtttttcca | aagagggttt | Lgggaacttc | 600 |
| a~+a+++aaa | aaaaaaaaa | caagcaggtg | aggaaaaaaa | gcgaggaagt | gtaggcagtg | 660 |
| acadatactc | acattettqt : | αaaactctqt | ttaccctagt | aaatetgeat | LLLacatgeg | 720 |
| Spansage | gtaaaggaaa | tagtcaataa | tgcattcctc | ccayyacayy | cccacgcgga | 780 |
| +++++aatct | tatacttaca | ctataaaaat | aagctggtaa | ctgacallyl | Cayyycyaya | 840 |
| ++cagcagaa | ctcagtttta | ggactaactt | acagaggagc | tgtgtateet | yaayacccag | 900 |
| caactaacaa | ggaatttcct | taggagcaat | gtgtgaggga | ggccatctga | ggagaccege | 960 |
| aactttcttt | tattatagaa | atctggctta | tggatgaatc | tacgacacag | gattytyaaa | 1020 |
| ttacacctct | ttgggaacaa | aaggaaggca | gtattgcatg | acttagttic | Cagcicac | 1080 |
| +++aaa+++a | acataataaa | tttaaaatct | tgagagkcta | CELLCULUCA | Cacccaccag | 1140 |
| anatattaaa | taagcaggaa | gacaacctga | ggttggctct | ttactttgag | KUCCUACACA | 1200 |
| ataaattaca | acctaattta | gtacataaac | ccaaacctaa | LLLaygagta | aacccccgc | 1260 |
| aggagatagn | cacatttcac | ccaatcacag | gcttccagct | aacaayacca | cgcccaaaca | 1320 |
| aggaaatac | ctcatcacat | gatgctcaaa | taaqqcagcc | acctaggcga | ggccaaccag | 1380 |
| aggedaatge | tactttgctt | aattottcao | cctgtacaaa | tttgctgctt | atgactgctg | 1440 |
| graactitte | tctaaacctc | ttctaattta | gagtgctgcc | ttatatatga | attgttcttt | 1500 |
| agcagagerg | aattggttaa | atttaacttc | tctaaaqttt | tgtattaaat | tgtatgtaaa | 1560 |
| ggtcacataa | cacaatttgg | attcadatac | ccaaatattq | actatgataa | tgtaaataat | 1620 |
| acattggtag | actgatttac | aaaaacctaa | acaaqtttqa | tattctgaat | attcacttct | 1680 |
| ccttaagcag | aaattgccaa | gaccttacaa | ttggcaggaa | aaaaatgtgt | gttggttaaa | 1740 |
| tetgatgaaa | taacaacaag | aacattacca | caattagaaa | actcttacta | tgccaggcac | 1800 |
| taagttatgt | acacctttgt | accettetta | atcctgaaaa | atttctaata | aatatgcatt | 1860 |
| tattataaac | tgtatttaat | attaartota | tttaatattq | cccctatttt | gtgaattaat | 1920 |
| taatattatt | actggcttgc | actaagegea | аааааааааа | aggggggggg | C | 1971 |
| gcagcaataa | actiggettige | aacggaaaaa | addudada | 555-5 | | |
| 010 1035 | | | | | | |
| <210> 1235 | | | | | | |
| <211> 1086 | | | | | | |
| <212> DNA | · | | | | | |
| <213> Homo | sapiens | | | | | |
| 100 1005 | | | | | | |
| <400> 1235 | gcgagaaact | aasasatasa | aagctaaatg | taactaaaat | cacccagtca | 60 |
| ccacgcgtcc | agaagcaaaa | ggagagcgag | atactagaa | agatcaatga | aaccctgaaa | 120 |
| gagattgctc | agaagcaaaa ggagcatcaa | actgcayact | geeeeggaga | atoccaagag | cctaataacc | 180 |
| cttcctccca | ggagcatcaa | graggaargra | tatttccctc | caccaattcq | actcccagac | 240 |
| atcttacacc | tgctcgttgc | tetgtettag | racccedeg | gaatcctcca | gtctcggcaa | 300 |
| catgtttcca | tccaagtggt | tgtggtccag | aaacyayaay | gaaccccca | gtctcggcaa | 360 |
| atccaagagg | aaataactgg | taacacagag | getetteetg | taataaaaa | gacactcatc | 420 |
| tttgacacct | tgttcgacca | tgececagae | aagetgaatg | tcacadaact | gacactcatc | 480 |
| actttcgtga | acaagcacct | gaataaactg | aacctggagg | tagaaaata | ggaaacccag | 540 |
| tttgcagatg | gggtgtacct | ggtgctgttc | atggggetee | . cggagggcca | ctttgtgccc | 600 |
| ctgcacagct | tcttcctgac | cccggacagc | tttgaacaga | aggictigaa | agaagacata | 660 |
| gcctttgagc | : tcatgcaaga | tggagggttg | gaaaagccaa | aaccycygc | agaagacata | 720 |
| gtcaactgtg | , acctgaaatc | tacactacga | gtgttgtaca | accicicac | caagtaccgt | 780 |
| aacgtggagt | gaggggctgc | cctgggccca | ccactgccca | ayayıtırı | ctgttggcgt | 840 |
| actggaccct | : cctccgaact | geettaceet | gettatteet | gtetettge | ctgtgctctc | 900 |
| ccacaagtco | agctgcaacc | : cagagatagt | ggaaactgaa | accayyaays | aaatcatcaa | 960 |
| taactcagto | g ggctgaccca | tccctcccag | g gcgctgggga | | aatgaaggtt | 1020 |
| gggaaggttg | g ttcccttccc | ggtgccaggt | ccagatttcc | ctcatgatt | gggaaccagc | 1080 |
| ttaggcaaaa | a gagtccccac | : aagatgaaaa | a taaagatcct | agttaccati | caaaaaaaaa | 1086 |
| aaaaaa | | | | | | 7000 |
| | | | | | | |
| <210> 1230 | 5 | | | | | |
| <211> 559 | | | | | | |
| <212> DNA | | | | | | |
| <213> Home | o sapiens | | | | | |
| | | | | | | |
| <400> 123 | 6 | | | | t pattagtgat | 60 |
| ggcgagaag | a cgacagaagg | g gatggtgat | g aatccattt | a tatttaatg | t aattactgat | 120 |
| acacttcac | t ttaaqtctaq | r catattocta | a cttactttt | g cctcaattt | E EGLGLGLLCL | 180 |
| tttcctgcc | t tctcttatt | t taatcaaat | a gtcttgact | a tctcattac | a tcatgtattc | 100 |
| | | | | | | |

| + | atgtatctca | atattattoo | tttagtggct | aacttagcaa | ttacaacaaa | 240 |
|-------------------------|-----------------|--------------|--------------|-------------------------------|------------|------|
| cagicatici | actaacatct | cacacactca | ggaaatagaa | accotctoaa | ctatcctacc | 300 |
| actaactaat | ctagtcctca | tagacgeteca | atccctaccc | atcctttaca | taacagacgm | 360 |
| cgccatcatc | ctagteetea | restances | accectacge | caatootact | gaacctacga | 420 |
| ggtcaacgat | ycctccctta | ccatcaaatc | aattggccac | caatggtact | ttaatttcct | 480 |
| gtacaccgac | taaggcggac | tagtcttcaa | cttcctacat | acttcccca | | 540 |
| | gactgcgact | ccttgacgtt | gacaatcgag | tagtactccc | ggattgaage | |
| ccccattcgt | ataataatt | | | | | 559 |
| | | | | | | |
| <210> 1237 | | | | | | |
| <211> 1425 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | - | | | | | |
| <400> 1237 | | | | | | |
| aecaatatat | cagaggtcag | gtgaatatcg | cagatgaggc | aaaactttgt | agcccaattc | 60 |
| gacggcgcgc | tgaagtgttg | attatacaat | atataatcaa | atattatcat | ggagaagaat | 120 |
| tagaaaatt | ctgttgacca | ataccaacta | caggtattgc | agttttaggt | gcatctcatc | 180 |
| tgggccccc | acatacatct | acgccagecg | aatttaaca | ggattcagaa | agctgtagtg | 240 |
| gatetgetga | gcagcaaacc | cagacgcaac | ggccccgcca | ctttttagat | gcaaatttgg | 300 |
| gagcagacct | tgctttggag | accaaacacc | gaccacaacc | actaataata | acccattate | 360 |
| ctttcggaag | tgetttggag | cucucgate | caaccaccga | ataggatta | gaaatgette | 420 |
| acggttgtca | tataaaatcc | acttttcatt | geacgreaaa | attettast | ttttaataaa | 480 |
| atcattgttc | gatagaataa | aagaaamcat | ttcaaaatga | cttttttgat | aataaaaaa | 540 |
| ctcatgaggc | acccacttat | cgagcttttt | cacctttcca | atttgcttga | tacacacac | 600 |
| aaccatagaa | tggtcgatgt | tgagttcttg | ggcaacttct | cgcatagttg | taagaggate | 660 |
| agcttcaatg | attgctcaca | attggttatt | gtcaacttct | gatggccgac | aactgtgctt | |
| ctcatcttca | aagttcccat | cccctttgta | aagcttcttg | aaccaccact | gccctgtaca | 720 |
| ttcattagca | gttcctggga | aaatgcattg | ttgttgttgc | gaattgtctc | tgctgcttta | 780 |
| cgacccattt | tgaactcaaa | taagaaaatc | gctcaaatty | cctttttgtc | tggcatcatt | 840 |
| tcaaaagtgt | aaaataaatg | taaaataaac | agcaagtaag | aagtcattag | caaaaaagaa | 900 |
| taaaqtqaqa | aacacacatt | gaaatgatgt | ataacataac | cacatttatt | taagaatgta | 960 |
| ttacaatato | aaatgacaaa | tttcaacaat | gcaaaaacct | caattgcttt | tgcaccaacc | 1020 |
| taatatatgt | atccctcaaa | caactaacta | tacttagcat | ctctcaatgt | gctcactgcc | 1080 |
| catttttata | tcttccttga | agaagtetet | ctttaaatgt | gttttttaaa | ggaattttct | 1140 |
| tottaatatt | gaattacagt | tataggaatt | tttatatctt | caagatataa | gtgctttatt | 1200 |
| agaaatatga | cttgcaagta | atttctccca | gtctatagtt | tatgttttca | tgttcttacc | 1260 |
| agtaaaatat | taattctttg | tcatacaaac | ataaacaaat | tttattaatc | tagcaagtag | 1320 |
| ageddadetae | gaagtcatac | ttgcaatatt | aaggagaact | tactgtttca | acctagtcct | 1380 |
| taagaaacta | aaatgtaaaa | aaaaaaaaaa | aaaatgatcc | tcgag | - | 1425 |
| ccaagaacca | addigidada | aaaaaaaaa | u.u.u.u.g | 3-3 | | |
| <210> 1238 | · | | | | | |
| <211> 2324 | | | | | | |
| <211> 2324 <212> DNA | • | | | | | |
| <213> Homo | ganiene | | | | | |
| \213> HOM | sapiens | | | | | |
| <400> 1238 | 2 | | | | | |
| ~~~~~~~~~~ | , cadaccactt | ggaaaaacta | togaattett | tttgaatgag | tctgcttgta | 60 |
| ggcacgaggc | cayyccacci | taataaacta | tttgaactct | ctgcctttaa | cctccccttt | 120 |
| atyteacted | . gccaccccc | e agregageed | atagaggga | gaggggagct | cttatatcca | 180 |
| gttcataggg | , ettegeeete | tattttatet | ttetettaae | , gaggggagas , gcacataagc | acatcataga | 240 |
| tagetgette | accedecty | - cacttegett | catagatata | gedededdge | tcaaccaaac | 300 |
| ctacataaca | a gcagtgtgag | gagillaata | catguatgua | gacacacaca gacacacaca | tcaaccaaac | 360 |
| ttagtgtcag | g aaaaagcaac | : LLCadaattC | . acaacccagt | . yaaaaayaaya . atacaaccto | agaacatggt | 420 |
| tggtccaaal | gccacgacaa | geleaacaat | . cacaccayga | . alayaaccic | ataaaactct | 480 |
| tgtgctaag | a agcagttttg | rgataatcaa | agcatetete | . ccccacca | ggtctaggta | 540 |
| ctgaggttaa | a gttagttata | caaggtcaca | ccaataatta | gyaytatacc | taggagccaa | 600 |
| actcaagtc | t tgtttacatt | tgtacatttc | : acaaaacttt | . ataaattete | catcattaaa | 660 |
| tatgtcctg | g attatctaat | : ctacacacac | actgtccagt | aagaaagaat | tttctgcaga | 720 |
| aagtctcaa | c ttccagtgag | , cccactaatc | : tctaaaagac | atgictiact | tgatttaatg | 720 |
| ttaatttct | c cccacaatgo | attctcttcc | tctttccacg | g cagttctatt | ttgatggatc | |
| ctgataagc | c ttgtacctag | gaaattette | : caggctagtt | tttccactac | aggcgctggc | 840 |
| gtttcccac | t gaccatcato | : atagccggtg | , cataatgago | : ccaccaagct | cttgaatatg | 900 |
| tccagagcc | a aatgcagaag | g agaaaggact | gacctgggc | c actgttcagt | gttttactgt | 960 |

```
aacacaaaac aatagaaagt gctcttttat tcactcaagt cctaaaggtg ctgtactctg
                                                                   1020
gattaaagag gtagcttggg gcaaacagaa accccaaaag actcatgttt ttctttggcc
                                                                   1080
ttaggaagct cagacctgac tttgtaggcc aagtttggtt atggtatgag gactttacac
                                                                   1140
                                                                   1200
ttaagctttt atcttaatcc tcaattgcct aacataatta cttttgtctt atacatattt
ctgtaagtca ttgtttattt ttcttgaaga acaaggtaaa ttactttcac cattttttt
                                                                   1260
ttattttgaa atagtcaccc aaagttttca agatatttac cagaggaaag ttttagtgtg
                                                                   1320
ccctttaccc agtttcacta aatggttaca ttttacataa ataatcaaaa tcaagaaatt
                                                                   1380
gacactggtg caatatgtat atgtgtagtt ctaggtcatg ttctcacata tgtagattcc
                                                                   1440
tgtaaccctg gagcaccctg aatcaagata cacaactatt ccatccccac aaagatcttt
                                                                   1500
cctgctatct cttcatatcg tacccactcc cttcaccccc cgtgtattag tccattctca
                                                                   1560
gaccactata aagaaatacc caggactggg taatttttaa aggaaagagg gctaattgac
                                                                   1620
ttacagttct gcatggctgg ggaagcctca ggaaacttat aatcatggcg gaaggaaaag
                                                                   1680
                                                                   1740
caggcgtgtc ttacgtggcc agctggtaag agagagagtg tgtaagagca aggaaaactg
ctttataaaa cccatcagat ctcatgagaa ctcactcact atcatgagaa cagcatggag
                                                                   1800
                                                                   1860
aaactgcccc cataattcaa tcacttccct ccctccacac atgaggatta caattcaaga
tgagatttgg gtggggacac agacccagac tacatcacct ggcacccacc aacctgttct
                                                                   1920
                                                                   1980
ccattgccat aattttgtca ttttgagaat gcatataaat cagttcatgt agtatgtgaa
ggtaaatata tttttgaagt acatttattt tttcactcat ctttttttct ctagatcatt
                                                                   2040
ttcatttacc attttattaa catatccact tattcaagca gaagacttgg ctgggaaagc
                                                                   2100
                                                                   2160
caccactgga gagattcaaa atgttctaag accactctta cttcactgta gcatataatt
                                                                   2220
tggtttagta acttacacgt aaaaatttta tagatgatag gacagataac tatatcttta
ttctctgtgg cagattcgat aatggcttcc caaagatgtt atccatgcct taatcccttg
                                                                   2280
2324
<210> 1239
<211> 2041
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (2017)
<223> n equals a,t,g, or c
<400> 1239
gggtgagggg aaaggtatgt gtttgcatct tctgttagcg atttctggga ttctgaatct
                                                                     60
 tcactgtcac ttagttctgt gcagttgtgg gagatatacc cagaagacac aggcaaatac
                                                                    120
aacctgggta actagctagg ggtttgttcc caagtcccta tcttatatgt cctggcgagc
                                                                    180
 tgccctaaac tacgtgtgag gaataaagac tgtgttcttt cagctcagac ctgtgattct
                                                                     240
 tgagtgtttt aagagtcttt taaaatctat gaaccctctt tccagcaagt cgtaaatgta
                                                                     300
 cagaatagtt ttgtgtaggt tttcagggaa ttcatgaata ccactaaagc tgttccagta
                                                                     360
 gactgtattg ggagtcttat aggataatta ctggcaggct tgggcaacct cttggcccca
                                                                     420
 ttcccttagc tgtgtgtctt gatkytagcc ctgtgaaaga gtccttcact cttaagattt
                                                                     480
 agagcccaga tgacctttgc cagccgttta ccttttttcc tggggtgtct tgttgatcct
                                                                     540
 gctgggtttc tatgggtaca agaccctctt aaacatgaag cagctctata tttgtcgttt
                                                                     600
                                                                     660
 taaaatttat tttattattt ttaacaaatt ggccagagac cgccttttta aaaattttct
 720
 tttttttcct tttctttcct ttttcctttc cttccttcct ttcttgcctt tcttccttta
                                                                     780
                                                                     840
 ttgctttcct ttctttctt tctttcaccc aggctggagt gcagcmcact gtaacctcaa
 gttcctgggc ttccaagwag tgggactata ggccacacca ccatggcccc ataatctttt
                                                                     900
                                                                     960
 ttcttttttt acttttttt ttttttagag acgggggtct cattatgttg cccaaggatg
                                                                    1020
 atctcagact cctgggctca agcagtcttc ccaccttgat ctcccaaagt gctgggatta
                                                                    1080
 tagatgtgag ccaccatgcc caatctttgt ttttttaatt ggcaagtaaa aattgtgaag
 acttatggtg tacaacatgc tgtgttgata atgtgtatac attttgtaat ggttaaatca
                                                                    1140
 agctctttaa catgtgtatc acctcacata cttatttttt tgtggtgaga acacttgaaa
                                                                    1200
 tctactctca gcaattttaa agtatataat atgttgttac taactgtagt cacatcacta
                                                                    1260
 tgatgtgcaa tcgatctctt gaacttactc ctatctacct gacattttgc atgctttaca
                                                                    1320
                                                                    1380
 tctccccagt ctcccaaccc ccagcttctg agaaccacca ttctacttyc kgcttcwatg
                                                                    1440
 agtccaattt tgtttgcttt agaggtggta cctcactctg tcacccaggc tagagtgcag
                                                                    1500
 tggcacaatc atggctccct gcaatctcta actcctgggc tmaagtgatc ctcccgcctc
 agtctcccaa gtagctgaga ccataggcgt csgcmaccac gcccccagct aagktttaaa
                                                                    1560
```

```
ttttttgtag agataaggtc ttaycakgtg cccaggctgg cctcaacctc caaagtgctg
ggawtgcagt tgtgagccac tgcactaagc ctgagtcgac ttttttggat ccacacttaa
                                                                   1680
gtgagatcat gcagtatttg tctttgtatg cctggcttat ttcatttaag ataatatttt
                                                                   1740
ccaggtttat ctgtgttgtc ttaaatgaca agatttattt tgttgttgtt aaggctgaat
                                                                   1800
agattctgtt gtatatatat gctacattat ctttatctcc tcatctgttg atggatactt
                                                                   1860
aggttgattc cctatcttgg ctattgtgaa tagtcttgca ataatcatga gagttcagat
                                                                   1920
atctcttcaa catattgact tcattttttg gggatatata cctagtagtt ggttttatat
                                                                   1980
ccatctcatt aataactaca tgaaagacaa aaagagnaaa gaagaataat ccagctatct
                                                                   2040
                                                                   2041
<210> 1240
<211> 2054
<212> DNA
<213> Homo sapiens
<400> 1240
gggtgagggg aaaggtatgt gtttgcatct tctgttagcg atttctggga ttctgaatct
                                                                      60
                                                                     120
tcactgtcac ttagttctgt gcagttgtgg gagatatacc cagaagacac aggcaaatac
aacctgggta actagctagg ggtttgttcc caagtcccta tcttatatgt cctggcgagc
                                                                     180
                                                                     240
tgccctaaac tacgtgtgag gaataaagac tgtgttcttt cagctcagac ctgtgattct
                                                                     300
tgagtgtttt aagagtcttt taaaatctat gaaccctctt tccagcaagt cgtaaatgta
cagaatagtt ttgtgtaggt tttcagggaa ttcatgaata ccactaaagc tgttccagta
                                                                     360
gactgtattg ggagtcttat aggataatta ctggcaggct tgggcaacct cttggcccca
                                                                     420
ttcccttagc tgtgtgtctt gatkytagcc ctgtgaaaga gtccttcact cttaagattt
                                                                     480
agageceaga tgacetttge cageegttta cettttttee tggggtgtet tgttgateet
                                                                     540
                                                                     600
gctgggtttc tatgggtaca agaccctctt aaacatgaag cagctctata tttgtcgttt
                                                                     660
taaaatttat tttattattt ttaacaaatt ggccagagac cgccttttta aaaattttct
720
                                                                     780
tttttttcct tttctttcct ttttcctttc cttccttcct ttcttgcctt tcttccttta
ttgctttcct ttctttctt tctttcaccc aggctggagt gcagcmcact gtaacctcaa
                                                                     840
                                                                     900
gttcctgggc ttccaagwag tgggactata ggccacacca ccatggcccc ataatctttt
                                                                     960
ttctttttt acttttttt ttttttagag acgggggtct cattatgttg cccaaggatg
atctcagact cctgggctca agcagtcttc ccaccttgat ctcccaaagt gctgggatta
                                                                    1020
tagatgtgag ccaccatgcc caatctttgt ttttttaatt ggcaagtaaa aattgtgaag
                                                                    1080
acttatggtg tacaacatgc tgtgttgata atgtgtatac attttgtaat ggttaaatca
                                                                    1140
agctctttaa catgtgtatc acctcacata cttatttttt tgtggtgaga acacttgaaa
                                                                    1200
tctactctca gcaattttaa agtatataat atgttgttac taactgtagt cacatcacta
                                                                    1260
tgatgtgcaa tcgatctctt gaacttactc ctatctacct gacattttgc atgctttaca
                                                                    1320
tctccccagt ctcccaaccc ccagcttctg agaaccacca ttctacttyc kgcttcwatg
                                                                    1380
agtccaattt tgtttgcttt agaggtggta cctcactctg tcacccaggc tagagtgcag
                                                                    1440
tggcacaatc atggctccct gcaatctcta actcctgggc tmaagtgatc ctcccgcctc
                                                                    1500
agtctcccaa gtagctgaga ccataggcgt csgcmaccac gcccccagct aagktttaaa
                                                                    1560
ttttttgtag agataaggtc ttaycakgtg cccaggctgg cctcaacctc caaagtgctg
                                                                    1620
ggawtgcagt tgtgagccac tgcactaagc ctgagtcgac ttttttggat tccacactta
                                                                    1680
agtgagatca tgcagtattt gtctttgtat gcctggctta tttcatttaa gataatattt
                                                                    1740
                                                                    1800
tccaggttta tctgtgttgt cttaaatgac aagatttatt ttgttgttgt taaggctgaa
tagattctgt tgtatatata tgctacatta tctttatctc ctcatctgtt gatggatact
                                                                    1860
                                                                    1920
taggttgatt ccctatcttg gctattgtga atagtcttgc aataatcatg agagttcaga
                                                                    1980
 tatctcttca acatattgac ttcatttttt ggggatatat acctagtagt tggttttata
 tccatctcat taataactac atgaaagaca aaaagagaaa agaagaataa tccagctatc
                                                                    2040
                                                                    2054
 taaagtcacg aaaa
 <210> 1241
 <211> 4038
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> SITE
 <222> (1764)
```

<223> n equals a,t,g, or c

```
<220>
<221> SITE
<222> (4030)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (4037)
<223> n equals a,t,g, or c
<400> 1241
caggaactkg cgctkaagac cctgggraca gatggccttt ttctcttttc ctccttggac
                                                                      60
actgacgggg atatgtacat cagccctgag gagttcaaac ccattgctga gaagctaaca
                                                                     120
gggtcaactc ccgcggccag ctacgaggag gaggagttgc cccctgaccc tagcgaggag
                                                                     180
                                                                     240
acgctcacca tagaagcccg attccagcct ctgctcccgg agaccatgac caagagcaaa
                                                                     300
gatggcttcc taggggtctc ccgcctcgcc ctgtccggcc tccgaaactg gacagccgcc
                                                                     360
gcctcaccaa gtgcagtgtt tgccacccgc cacttccagc ccttccttcc cccgccaggc
caggagctgg gtgagccctg gtggatcatc cccagtgagc tgagcatgtt cactggctac
                                                                     420
                                                                     480
ctgtccaaca accgcttcta tccaccgccg cccaagggca aggaggtcat catccaccgg
                                                                     540
ctcctgagca tgttccaccc tcggcccttt gtgaagaccc gctttgcccc tcagggagct
gtggcctgcc tgactgccat cagcgacttc tactacactg tgatgttccg gatccatgcc
                                                                     600
gagttccagc tcagtgagcc gsccgacttc cccttttggt tctcccctgc tcagttcacc
                                                                     660
ggcsacatca tectetecaa agaegeeace caegteeger aetteegget ettegtgeee
                                                                     720
aaccacaggt ctctgaatgt ggacatggag tggctttacg gggccagtga aagcagcaac
                                                                     780
                                                                     840
atggaggtgg acatcggcta cataccccar atggagctgg aggccacggg cccctctgtg
                                                                     900
ccctccgtga tcctggatga ggatggcagc atgatcgaca gccacctgcc ctcaggggag
                                                                     960
1020
tgcccggcgc ytggaggtgg ccatgtaccc yttcaagaag tctcctactt gccgttcact
gaggccttcg accgagccaa ggctgagaac aagctggtgc actcaatcct gctgtggggg
                                                                    1080
                                                                    1140
gccctggatg accagtcctg ctgaggttca gggcggactc tccgggagac tgtcctggaa
                                                                    1200
agttcgccca tcctcaccct gctcaacgag agcttcatca gcacctggtc cctggtgaag
gagctggagg aactgcagaa caaacaggag aactcgtccc accagaagct ggctggcctg
                                                                    1260
cacctggaga agtacagctt ccccgtggag atgatgatct gcctgcccaa tggcaccgtg
                                                                    1320
gtccatcaca tcaatgccaa ctacttcttg gacatcacct ccgtgaagcc cgaggaaatc
                                                                    1380
gagagcaatc tcttcagctt ctcatccacc tttgaagacc cgtccacggc cacctacatg
                                                                    1440
cagttcctga aggagggact ccggcgtggc ctgcccctcc tccagcccta gagtgcctgg
                                                                    1500
acgggatctg atgcacaggc ccccacgcct cagagccaga gtggtcctca gcccatttca
                                                                    1560
gcactgcaga tgccgcccac tcccacccca ctcctaggct gccttggagg gtacaagatc
                                                                    1620
cactgagggt ggccaccaca gccttggctc catggtggcg ggtagacaag ggatgcctgg
                                                                    1680
gctgactggg cagaggaacc tctagctctg actgtcactc ggctctccct acccatttgg
                                                                    1740
ctctggaagc tgcttggccc cccnagatca gggcctgggt gaactccctg gacctttcct
                                                                    1800
                                                                    1860
agccagccgc acagtctagg cccttgtggg gtgaagaatg gagggaggag caggctagga
agacggggcc accaccctct ccttgctttc agcccttccc acaggaaaca tcaagaagcc
                                                                    1920
ccagccagga ggggccaggc tgccaaggcg gctcccctgt ttatctagag ccttcgttcc
                                                                    1980
tggccatacc ccggactgcc ctcctgtgcc tgatgtcccc agctggggtc agtctcaaca
                                                                    2040
ggagccagtc ttctggagcc tctgggcaga accctccatc agagtggaaa tcagacggga
                                                                     2100
                                                                     2160
cccctgcag cttccctgac cacgccactg accagctatc tggggaagtt tactgtgaag
gggtttctgc ctttagcaat ggggttcact aagggggttc ccgaggccca gggccaaggc
                                                                     2220
actcccaccg cctaccttag cacagggtct ctgcaggact gcgggagcca gcgctcctgc
                                                                     2280
cgcccctctt gcccctcaga ccttgcatcc acagaagcac aacccagcca aacaccacag
                                                                     2340
                                                                     2400
ccttctccag agccggcact gtcccggcaa ccaggggtgc cccaggctag ctcttctacc
tctggggcac cacggactcc ccttggccac tcttgggact ttggtccacg tcctgagcca
                                                                     2460
ctgaccacgg ccagtctctc tttttatatg tgcagaaaag tgtttttaca caaactttct
                                                                     2520
catggtttgt aggtattttt ttataacccc agtgctgagg agaaaggagg ggcagtggct
                                                                     2580
tccccggcag cagccccatg atggctgaat ccgaaatcct cgatgggtcc agcttgatgt
                                                                     2640
ctttgcagct gcacctatgg gaagaagtag tcctctcttc cttctcctct tcagcttttt
                                                                     2700
aaaaacagtc ctcagaggat ccatgatccc cagcactgtc ccatcctcca caaaggccca
                                                                     2760
                                                                     2820
caggcatgcc tgtactctct ttcattaagg tcttgaagtc aggctgcccc ctccccagcc
cccagttctc tccccacccc ctcaccccac ccggggctca ctcagcctgg cagaggaaga
                                                                     2880
                                                                     2940
aggaaggcag acatctccgc agccactcct gggcctttta tgtgccgagt taccccactt
```

```
tgttttgaga cggagtcttg ctctgtcacc caggctggag tgctatggct cgatcttggc
                                                                 3060
tcactgcaac ctccacctcc caggttcaag caattctctt gcctcagcct cccgagtagc
                                                                 3120
                                                                 3180
tgggattaca ggtgcatgcc accatggctg gctaattttt gtattttag tagagatggg
                                                                 3240
gtttcaccat attggtcagg ctgatctgga acttctgacc tcaggtgatc cacctgcctc
                                                                 3300
agcctcccaa agtgctggga ttacaggcgt gagcaatcgt gcccagcctt gttcttaatt
                                                                 3360
ttgtatcatc cagtcatcgc taatattaca cgcaccttct cacttaatcc tcacgacaag
cctgtgaggc agatgctcat tgttcccatc ttgatgaaac ttgagtctca gggaagtgaa
                                                                 3420
gtgacttgcc cagggtcact caggtagagt tgagattcaa acccacatgt ggctccaaag
                                                                 3480
                                                                 3540
tctgcatctg gatttggggg tgttttttgg catggcaccc tcacctctct ccctgcctgt
tttccccaaa gtggaaagga aggcctttca aaccagagtg tctcactccc ctctgacctc
                                                                 3600
cagaccagat ggggcatgag ccagccagct cagccaggct ccctgtgtcc tgggaggaag
                                                                 3660
tgtccccatc ccccatgccc cttatgggga gggagggcgt ctgatgctct ctctctgcct
                                                                 3720
ccccccatc ctgtcaggca caggtgacgg gggcagccca tgcgagccct tctcctgctg
                                                                 3780
ctctgggagg gccagttcca cattgagcca gcctggtccc atggaaaatg atggcctggg
                                                                 3840
ctttctgagg ccttatctga tgcctctgca gttcatgtcc cccaccaggc ctcgaggctc
                                                                 3900
agggtgggag agggccccgg gctgccctgt cactcctcta acacttccct cccctgtccc
                                                                 3960
                                                                 4020
4038
aaaaaaaan aaaaaana
<210> 1242
<211> 1674
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (5)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (8)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (474)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (505)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (511)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (606)
 <223> n equals a,t,g, or c
<400> 1242
                                                                   60
ggcanagnat gacctttggt gaatatgtgg cactaatttt ttttacctta atcatattct
                                                                  120
 tgtcaagtag gcaacccatt gccccttgga gaccacacca gccctgtaag ttctcaccag
                                                                  180
cagcatggag attaggaaga ggggctgctg tgaccaggag atacacacgg ctttaagtaa
                                                                  240
ctgagagcct aaagaaagta acccagggag tccggtccag ttttaatatt tgtggatttg
 ttgtcacaca cattgtttag tcctgaaact aaaacctatt ttataaatag tagggttaat
                                                                  300
```

```
360
tcctcgaaac aatttcttta ttaataaatg tcctgtgggt ttagaaatat caggtaaata
tttgaataca gaatgatgat tgcaattact gttacaagcg tgaaacacaa acttcagatc
                                                                      420
aaatctaaag ttgctccatt taatgcatgc tagcaacagc cttaactttg gatncagtta
                                                                      480
                                                                      540
tttgaaacac tttcccggca tcttnccctt nctaatgttg tggggtggaa accggatggc
                                                                       600
aaatcactgt gagccggata cctcagcaca gtccaccttg tgtgtgactt cacaaatggg
                                                                       660
ggactncaca aatggggtaa ctgaatgtta ttactttcaa attttgacat ggagcattat
                                                                       720
gatcaaggaa atggagctgc cttatacatt aaacccgtga tttaatccta ttgacatttt
catagocatg cotocagatt ttatottttt ggcaaaatto tgattocaca gtttggtotg
                                                                       780
                                                                       840
attgaaataa atattccctg gacgtctggc taaaaatttt gctaacaatc ccagaggtgc
cattttctta ttaataaatt tcattggagc cttatttctt actatattca atttcgtttc
                                                                       900
aaacctgcaa gtccctggga tggtcccacg actagggcct gcacatttct tacaatggca
                                                                       960
aagcattttt taaaatttag ggtcaggttg aaaaattcta ggactaattc tgtagagagg
                                                                      1020
agggactgtt aactaacgtg agtggggaca gaggagtagg ttaccacatt tggagcagta
                                                                      1080
atagatgcaa acgatgtaaa tttgaaattt gcccctttag ttaaagaagg agcctgcaaa
                                                                      1140
gtccatttct ctgttttcag ccctgtcagt cacccattta ggatgttggc aaagtactgc
                                                                      1200
ttgagcagaa tgtgtaagaa agtaataatg aaagcaaaag tatgtcagac agttacttct
                                                                      1260
tccacatggt tagaggcatg tgattttcag cactgtgtgt tacagaaatg tcaggaatgg
                                                                      1320
tgtattataa cgtgtgcaag ataatgtcag tgtgcacaga gggtcttttt tccttatctg
                                                                      1380
attagtactg ttaatgttca aagaataaaa atggttttac agtttagatt ctgagatagc
                                                                      1440
aaaacctgat ttttcaacca tgacctgcat gagagaagca tcctaggaag tcttagatca
                                                                      1500
tacttttgag tttttaattt taatttatat agtgtttttt tatgtcttaa tatttttgtg
                                                                      1560
                                                                      1620
aactggtgta aattgttaat gcatataagc ttgtgtattt ttgtaaatag ttttgtgatt
                                                                      1674
tatttcttgc cccatatgta aatatttaga gtctcaaaaa aaaaaaaaa aaaa
<210> 1243
<211> 878
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (5)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (17)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (28)
<223> n equals a,t,g, or c
<220>
 <221> SITE
 <222> (49)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (60)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (877)
 <223> n equals a,t,g, or c
 <400> 1243
 tcacncggga accgctntga ccatgatncg ccargctsga aattacccnt cactaagggn
                                                                        60
```

| agaaaagata | gagetggagg | gcggtggcgg | ccactctaga | actagtgawc | ccccaaacta | 120 |
|-------------|--------------|-------------|-------------|--------------|------------|------|
| acaaaagccg | gageceeace | gcacacacca | ccatacacaa | ttccttattc | aaaatgccaa | 180 |
| cayyaacycy | gcacgagccg | caagaccctc | caccactaac | atatattooc | gagccagcca | 240 |
| gaacetggat | gactcatagt | caagaccccc | taccagtaac | ttcccactta | actacatect | 300 |
| ggagaccact | acaggaaaca | ctccatttat | tetaceegae | aaacatttaa | tattcttttc | 360 |
| caaccattga | aatgaatttg | accctgataa | cccaaggagg | taatattaaa | taggerage | 420 |
| caataatact | tggccccagt | attgtttgga | acctggagtt | tgetgttgaa | rgggaaagcg | 480 |
| ggatgacgtt | gcatgtatcc | aggctttggt | gctgctgtcc | taagaagggt | caggeetggt | 540 |
| cagcatatgg | tgctctcctt | tggtgctatt | tggctccagt | gtctttggag | tetgaggagg | |
| tttggccttt | aaaaatcaaa | ctgccaccgg | aactgcttta | aaaatgtttg | gttcacagcc | 600 |
| ttcactggat | tacctattgg | agcaaacaaa | gtgtaaccat | gtaaaacctg | tgagcttgta | 660 |
| ttgatatctc | atggctagag | ttccaaggta | aaagctattg | gatcttcgtt | tgtgtgtgtg | 720 |
| tatacatgtc | tagatgtgtt | tatttgtatg | tacacttatt | gttatatgtt | gtgtcaacca | 780 |
| aatcagctta | taaataaaag | agcactcata | aattaaataa | aaaaaaaaa | aaaaaactc | 840 |
| cgggggggg | cccggtaacc | cattccgccc | taatagng | | | 878 |
| | | | | | | |
| <210> 1244 | | | | | | |
| <211> 1134 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| 223 | ~ | | | | | |
| <400> 1244 | | | | | | |
| | acceaaaacc | tcaacatgct | ccattctqqt | ctactgttcc | cccacctcct | 60 |
| ttacctccaa | cctccattag | gagagctgtt | ccccaaccta | aaatggagtc | taggggcact | 120 |
| agagatagag | ctcctccatcgg | tgtacttccc | ttatcastaa | ctcctcccct | cagtettaga | 180 |
| ctagetggee | atagagatag | tcagacagag | cctaccaagg | tagaagtcaa | accaatacct | 240 |
| etacetggee | atggagetee | ccayacayay | gagataataa | asactccca | gatgaagget | 300 |
| gcatctcccc | accegaaaca | caaggtgtct | gttttggtgt | atageteeca | gacgaaggee | 360 |
| ctagcatgtg | tgtctgctga | aggtgtgact | gregaggage | tagatagtag | caaggetatt | 420 |
| cctgagaccc | aagagaccag | gcccagggag | aageeeeee | tagaggagg | caaggetgee | 480 |
| cccacaccaa | ggcagagcac | tgtccccaag | etgeetgetg | Lecacecage | toggetta | 540 |
| gaagctgtcc | ttcctgccta | ccccacgtac | teagggttet | gaagatgtgg | tacaggettt | 600 |
| catcagtgag | attgggaatt | gagggcatcg | gacctgtcca | gtctgctgga | gcagtttgag | |
| aaatcagaag | gtgagggaac | atgggtagtt | ttgctccaac | tettttttg | gtgatacttt | 660 |
| tttgggccca | gccctgtagt | tgcttaaact | agggtgagag | gggacagcct | tagccactgg | 720 |
| agcagacccc | taattgaaga | gagagacaag | attgaactgt | gacggtaatc | caagccaggg | 780 |
| acggcagtga | tacagtaagg | aaggtattaa | agagtagact | gggaatccag | gccaggcgtg | 840 |
| gtggctcatg | cctgtaatcc | cagcactctg | ggaagctgag | gcgggtggat | catgaggtcc | 900 |
| aggagtttga | gaccagcctg | gccaacatgg | tgaaaccccg | tatctactaa | aaatacaaaa | 960 |
| attagctggg | cgaggtggcg | ggcacctgta | atcccagtta | ctcgggaggc | tgaggcagga | 1020 |
| gaattgtttg | aacccagcag | gcagagattg | cagtgagccg | agatcgtgcc | attgcactct | 1080 |
| agcctgggcc | acagggtgag | actctgtctc | aaaaaaaaa | aaaaaaaaa | aaaa | 1134 |
| | · | | | | | |
| <210> 1245 | | | | | | |
| <211> 1260 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1245 | | | | | | |
| | | cccaccgcct | tgcctcactg | gcaatctgga | ctcgatggag | 60 |
| aacatcccc | cacctccatt | tggcactacc | caagtggagt | gtacccttgc | cctttccacc | 120 |
| tataccaccc | actccaacct | caccccagct | tgcccaatgc | ttctggggaa | tttaatagct | 180 |
| accatocado | ccacagggaa | tttgtgaggc | ttcttttatc | atctttgtat | ctccagtttg | 240 |
| tettett | ctccatagcc | ctacctctac | tttccttcct | tagaatcaga | ggttccttta | 300 |
| accepteted | tttctctacc | ttagagaaccc | cagggggggaa | gcagttetee | atctagtcac | 360 |
| accessores | aaaaaaaataa | ctacctccc | cctaccacct | gagtccctac | tccctccc | 420 |
| accaaayyca | addaycctyy | cttattttcc | grattrasa | acsacsaca | gtagtgaggg | 480 |
| congenerate | anagetttg | tactatitigg | ggaccicady | gactatacaa | tgactgctgt | 540 |
| gagagcagga | gaageetetg | cccycacag | geaactgeet | cettettest | ctttcaaagg | 600 |
| aaccaagato | aggtccccag | | gaggettt | catatattta | tttattaga | 660 |
| cagctaattg | ctagcaaatc | cccccgattc | tttasstass | tttasttta | tttgttagaa | 720 |
| gttttctgtg | gagctgaaac | ccagcctctg | tttgactggg | tasssaass | cttagttggg | 720 |
| ttcttagagc | ccctgtttg | ttgttttgtg | ctgtttccaa | . Lyaaaagcaa | gtttaccctc | 840 |
| agagttatgo | ttttccaaag | aggctgatgt | ctttgttttt | gttttttta | atgtttcagg | 840 |
| | | | | | | |

```
ttctaagtga agtgagttgg ggaggggttg ggagtgttag taatcaaggt ttagaacacc
                                                                      900
atgagatagt tacccctgat ctccagtccc tagctggggg ctggacaggg ggaagggaga
                                                                      960
gaggatttct attcaccttt aatatatttt tacaaaaaaa gcaaacaatt taaaaacaag
                                                                     1020
cccaccgctt ctgtacatgt ctaaatatat ttttagaagt gggtaggatt gtgaatttct
                                                                     1080
gatgcagggc ctttttataa ataggttagg gtagcatcat tcagacttct ctgttgtttt
                                                                     1140
tgtccctgtc tttttcttat gttgtgttac taatgtaatt tatatttttt ttagatcctc
                                                                     1200
cctttcctat agagataaaa gtgatttatc ttggmaaaaa aaaaaaaaa aaaactcgag
                                                                     1260
<210> 1246
<211> 1818
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (2)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (16)
<223> n equals a,t,g, or c
<400> 1246
gnaattcggc acgagnaaaa gagtgattgt gagtgttaga tatggccttt ccctttcgtg
                                                                        60
cttctagcca ccttgtcact gattttggaa acctcactta acctctatgg gtgggcctca
                                                                       120
atttccatct aaaatagaga agtagggagg aattggatca aaccagccca agaaaattta
                                                                       180
attaactatt tcaaactcta atgaaaaatc tctactttaa aaattgaaac acaaaaatgt
                                                                       240
tctgggaggt tctattcatt gtctgctttc ctacatttgc cctgattaca agactgagtt
                                                                       300
ccttgataat tgaaaccatg tctctttatc tagtgccyag catagtgcca agcacacagt
                                                                       360
gtatgcacag cctattggta tgaaagagaa cacaacttca ttaattctca tatctctcca
                                                                       420
gttcacaccc cttcatctcc tgtaaaacac cccttcccct acaattattt ctgttagtct
                                                                       480
ctaggtgttt cttgtattca agagtatgtc cacagtttgg gtgcctctgt gcattccttc
                                                                       540
                                                                       600
tatctgagca tctgccatca ttggtgcctg ccatgcactg ctgggaacat ttgacccctc
 tgggagcatc ttcctaatag atcccataaa ctgcaaagcc ttatggttac caaaatgatg
                                                                       660
 gtgtatatat atacttggag ccttgcaaag cccctaatga aagtatttcc ttcaccagct
                                                                       720
agaagtactc tcctttagcg atcagattaa aacacacacc caggtgtgtg ttttaaagaa
                                                                       780
 aaaggaccca agagggaaaa agtttccaag gcatgaatga attaagagtg gcaaatgcta
                                                                       840
                                                                       900
 ctgagataga aagattagga cggagaaaac agcactcact ctgacagtat tctttccaac
 tggatttggt aaataagagt gaagaggtac ctckagtgag cactgggaga agtcatactg
                                                                       960
 gaagggataa gcagtgattg acataagaaa gtaaaataaa ttcaggttca tccagacacc
                                                                      1020
 cccataatct tgccttgacc cagaaacatt gtgttcacag gactttcagc ttcccacccc
                                                                      1080
 cataagtaag cttcctaatt atgatatctt ggtcttgcca agcatttaga gggccttact
                                                                      1140
                                                                      1200
 ctgtggccct ccagatagtg atttgaatga ttaagtaaac ctctttttag ataagtgttc
 tagtccagtc taacatcagc ttgttggtct ttttggcact gtcattgtcc agtaccagca
                                                                      1260
 cattettgge teettgeeac atetetggee teaatgtggg aggeaaagae agtgageatt
                                                                      1320
 tccagagtgg tgagatgggt gcagcacata atgaggcgat gaccacacag catctctgaa
                                                                      1380
 cagcatgtcc acacagggct cgaagtcatt atgctgcatg tccacctcat gtccacaata
                                                                      1440
 gctgagcagt tgagattggt ggagtggacc ttctcattac tcatcatcta rargaaggtc
                                                                      1500
                                                                      1560
 ctcatcatct ctacttctca aaggggtaga attgaacctg aacctgcttg acagacaaga
 gcccaagcct aaccaaggtg gctgccatgg tgacccttgc cctgaaagcc atttccatta
                                                                      1620
 atttaaaaat tgtaggtata taggaactat aataacaggc ttaaaattaa aatttgctct
                                                                      1680
 gtttgttggg tcacacgtgt aatcccaata ctttgggagg ctaagccggg acgatcactt
                                                                      1740
                                                                      1800
 gagctcagaa gtttgagact agcctgggca acatagtgag atcccggtct ctaccaaaaa
                                                                      1818
 aaaaaaaaa aaactcga
 <210> 1247
 <211> 2154
 <212> DNA
 <213> Homo sapiens
```

```
<400> 1247
ggcacgaggg caggaatgtg ggatcagctt agctggtggt tctggctcca agttattcac
                                                                      60
acaaggctgc aatcaaggcg ttgtctgggg cttcggtctc cgaagacccc accggggcta
                                                                     120
aaggatccac ttccaagctc actaatgtgg ctgttggcag gaggcgtcag ttccttgcta
                                                                     180
catgcgcctc tttgtattgc tgctcatgac ataacttccc tggaaccagt gacccatgag
                                                                     240
agagagaaag caaacccaag acagaagcag cagtctttgt ataacctaac cacagaagtg
                                                                     300
acacgccatc acttctgcca tatggttgtt actggtcata caagccaacc ctggtacaat
                                                                     360
gtgggagggg cctatacaag ggtataaata ccgggaggga gaatcattga ggactatctt
                                                                     420
                                                                     480
agaggctgcc taccaaacaa ctcaagatat tagcagctta aacaagagaa aaatgtattt
tcctctaacg cagatatagt ctatggaaac agtccaaagt tgatatgatg gttccatctt
                                                                     540
                                                                     600
catgtgagat ccagacttcc tccctcatct ctttgccact tcatggtcta aggtggctac
                                                                     660
tcaagctcca gccatcacat ctgcactcca gccagtagga agaaaaaaga tctctttctt
                                                                     720
tttacaaaca cttcccagaa cttgcacata ccatgtctat ttatattccc ttggccagta
                                                                     780
attcatcaca aggttacttc cagcctgcaa aggaggctaa aaattttagt ctttatttca
                                                                     840
catgggttat gtgtccagaa agaattcaga ggttctatta ctgagaagaa aggggggaaa
                                                                     900
atggaggttt ggggataact agcaatctct gtttttgata acccaataaa ggcaatgaac
                                                                     960
tctttcacag aaaaaaaaaa aaaaaagaaa tcatgtacat gcaaaagtgt gcatgcaact
                                                                    1020
tcagagggtt tacagatgcc tgtgaagtca gtttatggat gtcacacaaa gaacctctac
                                                                    1080
acctctggcc aggacctcag cctgttcctg tgtatgaaca gtgttcactt agaccctttg
gacgaggtcc ctctgagagg gcaaaggaca cgcccagcac atttcctcaa tggggcatga
                                                                    1140
                                                                    1200
accacttcat ctaataccta cgtggtaggc tgtgtcaccc cgggaagagt cgtcctggtg
                                                                    1260
tctggcagat tgtggacctc actttccttc agcgacttca tgcaaaacaa gggctgataa
                                                                    1320
ggaagaaact gaaaggggtt ggtgtcacgg gttatgctgc gggacccccc atttgtgttt
                                                                    1380
tcaagaatca gccaatagtg ttcattggaa ttccagatca gcttttctct gctgacattt
                                                                    1440
caaatgccag gttacaagta cacaggcatg gagccattct caacactgtt caaattaacc
atacttttcc tagggctaaa gataggtcca aggttaaaac cacaatgaga taccacttta
                                                                    1500
                                                                    1560
cattgactag aacggctaaa ataaaaaaga acaacaatgc caagtattaa cgggagtgac
aagcaagagg aactgtcgtc tgttgctgga ggtatgtaaa atagtccagc cactttggag
                                                                    1620
                                                                    1680
gacagtttga cagtttcttt caaagttatg catgcactta ccataagacc cacctatccc
actcctgcaa gagagaggaa agcatttgtt cacaaaaaga tttgaacatg agaccgggcg
                                                                    1740
tggtggctca cacctgtacc agcactttgg gaggctgagg cgggcagatc acctgaggtc
                                                                    1800
aggagttcga gaccagcctg gcctggtgaa atcctgtctc tactaaaaat ataggccggg
                                                                    1860
cgcggtggct cactcctgca aacccagtac tttgggaggc cgagacgggc agatcacgat
                                                                    1920
gtcaggagat cgagaccatc ctggctaaca tggtgaaacc ctgtctctac taaaaaatac
                                                                    1980
                                                                    2040
aaaaaattag ccgggcatgg tgggtggcgc ctgtagtccc agctactcgg gaggctgagg
                                                                    2100
caggagaatg gcgggaaccc aggaggcgga gcttgcagtg agccgagatc accccactgc
                                                                    2154
<210> 1248
<211> 947
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (423)
<223> n equals a,t,g, or c
<400> 1248
gaattcggca cgagctttct agaggtaatt actatgttca gattcctggg acctttccag
                                                                      60
                                                                     120
gtatctgatg tataaatacc tctctcttt tccctcttt tctaacacag atattagtat
                                                                     180
tcctctgtgt cttactttat ccccttaata gtatatcttg gaaatcattg ttttctttaa
                                                                     240
aaaaatgttt taattgaggt aagcattcat tatacagtaa atgtcttgtt ccttttaact
                                                                     300
ggctgcatac cctgtcaacc tatggctgtg ccaacactgg agagagtctg ggttgagtat
agtctttttg ccattataaa cagggttgca gtgaacattc atgtgtatac ttctttgtac
                                                                     360
                                                                     420
ctatgtatga gtgtatcctg gataaattcc taaaagtgac gccactggat tggaggtcat
ttntttttta aactttttat tttgaaataa ttatagattc ataagaagtt gcaaaaacag
                                                                     480
                                                                     540
gacagagagg ccccagttgc ccttcaccta gtttctccca atgatagcat cttacataac
                                                                     600
atgatacage atggtatate atateaaaac cageacattg gtacaateta caaacettat
                                                                     660
tcagatttca ccagttttac atgcccttgt gtgcatgtgt gtctgtgtct ttgtggtttt
                                                                     720
atgtgctttt atcaggagta gatttgtata acctcaaaca agatgcagaa ctgttctgtc
```

```
agcacaaaga tecettgtge taceteatag teacaceaaa eeteetetee teettttgte
                                                                    780
                                                                    840
atcacggcat tectaactgt tgacaagcag etaatetgtt etceatetet gtaactttgt
                                                                    900
tattttgaga atataattga aatcgtatag catgtaacca ttgagatggg ttttttcact
                                                                    947
caccgtaatt cccttgaaga tcatccaagt tgttgcatgt gtcaatg
<210> 1249
<211> 808
<212> DNA
<213> Homo sapiens
<400> 1249
                                                                     60
agtccacgtt ctttaatagt ggactcttgt tccaaactgg agcaacactc aaccctatct
                                                                    120
cggtcatatt cttttgattt ataagggatt ttgccgattt cggcctattg gttaaaaaat
gagctgattt aacaaaaatt taacgcgaat tttagcaaaa tattaacgct tacaatttgc
                                                                    180
cattcgccat tcaggctgcg caactgttgg gaagggcgat cggtgcgggc ctcttcgcta
                                                                    240
ttacgccagc tggcgaaagg gggatgtgct gcaaggcgat taagttgggt aacgccaggg
                                                                    300
                                                                    360
ttttcccagt cacgacgttg taaaacgacg gccagtgaat tgtaatacga ctcactatag
ggcgaattgg gtaccgggcc cccctcgtg ttttttttt tttttttc caggacaaaa
                                                                    420
                                                                    480
aataaaatat ttattgatct atcacagcga gacacaaaaa gatgggcggg gcaggaatgg
                                                                    540
gaactgctct gaagttcagt ggaccgaggg agggatgggg ggtatacagt actgcatgtg
                                                                     600
gggacacccc gggtggggag gagatgcctg gcaccccagt ctgcacagcc ccgcacgccc
                                                                     660
tgggggagtg taggatgggg gtggaggcag ggcacaggcg gccatgacag gtcaaccagg
ttgatggtgg gtgcacccag ccagctagtg gtgccgggcg gtcaactggg gacatggatg
                                                                     720
                                                                     780
gacggaccga tggatgaatg gacggatggg cggatggatt ctacaagggc aaggtggcta
                                                                     808
ttcccagtgt ggggtggttt ctcgtgcc
<210> 1250
<211> 839
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (834)
<223> n equals a,t,g, or c
<400> 1250
                                                                      60
aagaagacat taaggaaatg tctgaagaaa tggataagaa caaaaacttg ttttcccaag
mttttmcaga gaatggtgat aatcgaratg ttattraaga tactttgggt tgtcttttgg
                                                                     120
gcaggttatc cttgctagas tcagtagtga atcaacgatg tcatcagatg aaagaaagac
                                                                     180
ttcagcaaat actaaatttc caggtaagta agatattatc aaaggatacg tgaccattct
                                                                     240
ctaggtattc agtaatagtc agtcacgagt ctgtgttaca gacctggttg ttgtttttct
                                                                     300
aaatgcgtaa tgaagaacaa gagcattgta gaaaatgaag ggggttgaat taaaggatta
                                                                     360
gaagctaaag attttttgct cctagaaatg gaaggttgag aaaaccaccc acttcaaact
                                                                     420
                                                                     480
aaggactgaa tagaattcaa tcaataaaag tcaaatttat ggatcattat aattataatt
tttagttact aataccggag tttaaacaca ttgagaaaga atatgcmgaa aatggccggg
                                                                     540
cacagtgctc acgcctgtga tcccagcact ttgggaggcc acggcaggca aatcatttga
                                                                     600
ggtcgggagt ttgagaccag cttggccaac ataatgcaac ccatctctac taaaaatmca
                                                                     660
aagattagca gggtgtggtg gtgcaggcct gtaatcccag ctacttggag gctgaggcag
                                                                     720
gaggatcgct tgaacccggg acgcagaggt agcagtgaac tgagattgca ccactgcact
                                                                     780
                                                                     839
ccagcctagg tgacagagca agactccgtc tcaaaaaaaa aaaaaaaaa aaantcgag
 <210> 1251
 <211> 971
 <212> DNA
 <213> Homo sapiens
 <400> 1251
 ggcacgagct catgtttcct agtatatatg aagtgacatg tataaatgac atgaatgctt
                                                                      60
                                                                     120
 tcaggcaaaa tgtttagatt gtgatttgaa aatgatgtgc atatgagaag tcgttaagat
 180
```

```
cctcttgcat tgacccatcc actttttcaa gttcacaatg attctttttt gctgctgcca
                                                                      240
                                                                      300
ttgaaggatg ccactgatac ctgtgagagg gcactctttg gcatttgcat tctgaaagtt
                                                                      360
ttgcattttc ttatttgtgt ttacttttta agttcatcct tgttctgcat gacagatatg
ccagggcctg caggaatagc attaaaattc tgttgttttt tagataactt tattagttta
                                                                      420
                                                                      480
agttttaaat gataaggacc gagagctaca attcctctgt tttttattct gaagctgaac
cacacaaata ttgaaaaaca atgctttgac tggagtgtta tatatatttc cacctaacta
                                                                      540
                                                                      600
gcttcacaca ataaaatctc taaagtttaa attgcttgaa cctgagaggc ggaggttgca
gtgagccgag attgccccac tgcactctag cctgggggat agagtgaaac tctacctcca
                                                                      660
                                                                      720
aaaaaaaaga aaagaaaaat aactgaggaa gacagttttc acagtgggtc aggtgagcct
agaattattg aatatcgtcc tttaacctat agctatgact ctaggttaaa gctcctcctc
                                                                      780
agcttgctcc agtcaagagt atctatgtat ttgagccatt tcctgaaacc agactctagt
                                                                      840
gtttctgatc aggaccagct cagtctttaa gtttctgaag tttgtttgct attttataat
                                                                      900
tatattcgtg aatactgtgc attgaagaaa taataaatct attgttgctt taaaaaaaaa
                                                                      960
                                                                      971
aaaaaaaaa a
<210> 1252
<211> 2351
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (72)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (141)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (294)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (303)
 <223> n equals a,t,g, or c
 <400> 1252
 attctacagc agaatatact tggaaaaact caagtttttc cacatacttg gaaaaactct
                                                                        60
                                                                       120
 ctagcatttg tnggaattta gtgtaattaa gtgaaaccta cctagcaact gtagtaatta
 aaagcgtggg gtgtgctttt ngttgagatc cgtgaatgtt tctgtaaaca caattttgat
                                                                       180
 tgtgttgcgc ttcttaaagg ttgtgatgac aacggtaatt ttaaccactt gaccgtatat
                                                                       240
 cgttttcatc cttgaagact gtcatatatt tccaagtgtc tttcctccct ggtnatttta
                                                                       300
 ggntaaagat cgaggtccgg aagccactag gagatttttt aattggtttt attggagcat
                                                                       360
 taacctggga gcgatcctgt cgttaggtgg cattgcctat attcagcaga acgtcagctt
                                                                       420
 tgtcactggt tatgcgatcc ccactgtctg cgtcggcctt gcttttgtgg ycttcctctg
                                                                       480
 tggccagagc gttttcatca ccaagcctcc tgatggcagt gccttcaccg acatgttcaa
                                                                       540
 gatactgacg tattcctgct gttcccagaa gcgaagtgga gagcgccaga gtaatggatg
                                                                       600
 cagacaacat atgttttaca gagtcttcat ttgaggattc cagaaatttc aaatattaca
                                                                       660
 accactecte acaegetece tgeageetgg etgaceatgt ttgatgetgt geteateete
                                                                       720
 ctgctcatcc ctctgaagga caaactggtc gatcccattt tgagaagaca tggcctgctc
                                                                       780
 ccatcctccc tgaagaggat cgccgtgggc atgttctttg tcatgtgctc rgcctttgct
                                                                       840
 gcaggaattt tggagagtaa aaggctgaac cttgttaaag agaaaaccat taatcagacc
                                                                       900
 ateggeaacg tegtetacea tgetgeegat etgtegetgt ggtggeaggt geegeagtae
                                                                       960
 ttgctgattg ggatcagcga gatctttgca agtatcgcag gcctggaatt tgcatactca
                                                                      1020
 gctgccccca agtccatgca gagtgccata atgggcttgt tctttttctt ctctggcgtc
                                                                      1080
                                                                      1140
 gggtcgttcg tgggttctgg actgctggca ctggtgtcta tcaaagccat cggatggatg
 agcagtcaca cagactttgg taatattaac ggctgctatt tgaactatta ctttttcctt
                                                                      1200
```

```
ctggctgcta ttcaaggagc taccctcctg cttttcctca ttatttctgt gaaatatgac
                                                                1320
catcatcgag accatcagcg atcaagagcc aatggcgtgc ccaccagcag gagggcctga
ccttcctgag gccatgtgcg gtttctgagg ctgacatgtc agtaactgac tggggtgcac
                                                                1380
tgagaacagg caagacttta aattcccata aaatgtctga cttcactgaa acttgcatgt
                                                                1440
                                                                1500
tgcctggatt gatttcttct ttccctctat ccaaaggagc ttggtaagtg ccttactgca
gcgtgtctcc tggcacgctg ggccctccgg gaggagagct gcagatttcg agtatgtcgc
                                                                1560
ttgtcattca aggtctctgt gaatcctcta gctgggttcc cttttttaca gaaactcaca
                                                                1620
aatggagatt gcaaagtctt ggggaactcc acgtgttagt tggcatccca gtttcttaaa
                                                                1680
1740
1800
atgctgcaag gattttacat aaatgccata tttatggttt ccttcctgag aacaatcttg
                                                                1860
ctcttgccat gttctttgat ttaggctggt agtaaacaca tttcatctgc tgcttcaaaa
                                                                1920
1980
agtcatttga gaccatgtgt cccatctcaa gccacagagc aactcacggg gtacttcaca
                                                                2040
ccttacctag tcagagtgct tatatatagc tttattttgg tacgattgag actaaagact
                                                                2100
gatcatggtt gtatgtaagg aaaacattct tttgaacaga aatagtgtaa ttaaaaataa
                                                                2160
ttgaaagtgt taaatgtgaa cttgagctgt ttgaccagtc acatttttgt attgttactg
                                                                2220
tacgtgtatc tggggcttct ccgtttgtta atactttttc tgtatttgtt gctgtatttt
                                                                2280
tggcataact ttattataaa aagcatctca aatgcgaaat mmaaaaaaaa aaaaaaaaa
                                                                2340
                                                                2351
ttggcggccg c
<210> 1253
<211> 2516
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (72)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (141)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (294)
<223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (303)
 <223> n equals a,t,g, or c
 <400> 1253
 attctacagc agaatatact tggaaaaact caagtttttc cacatacttg gaaaaactct
                                                                  60
 ctagcatttg tnggaattta gtgtaattaa gtgaaaccta cctagcaact gtagtaatta
                                                                  120
 aaagcgtggg gtgtgctttt ngttgagatc cgtgaatgtt tctgtaaaca caattttgat
                                                                  180
 tgtgttgcgc ttcttaaagg ttgtgatgac aacggtaatt ttaaccactt gaccgtatat
                                                                  240
 cgttttcatc cttgaagact gtcatatatt tccaagtgtc tttcctccct ggtnatttta
                                                                  300
 ggntaaagat cgaggtccgg aagccaccta ggagattttt taattggttt tattggagca
                                                                  360
 ttaacctggg agcgatcctg tcgttaggtg gcattgccta tattcagcag aacgtcagct
                                                                  420
 ttgtcactgg ttatgcgatc cccactgtct gcgtcggcct tgcttttgtg gycttcctct
                                                                  480
                                                                  540
 gtggccagag cgttttcatc accaagcctc ctgatggcag tgccttcacc gayatgttca
 agatactgac gtattcctgc tgttcccaga agcgaagtgg agagcgccag agtaatggtg
                                                                  600
 aaggcattgg agtctttcag caatcttcta aacaaagtct gtttgattca tgtaagatgt
                                                                  660
 ctcatggtgg gccatttaca gaagagaaag tggaagatgt gaaagctctg gtcaagattg
                                                                  720
 tecetgtttt ettggetttg atacettaet ggacagtgta tttecaaatg cagacaacat
                                                                  780
 atgttttaca gagtcttcat ttgaggattc cagaaatttc aaatattaca accactcctc
                                                                  840
```

```
acacgetece tgcageetgg etgaceatgt ttgatgetgt geteatecte etgeteatee
                                                                    900
ctctgaagga caaactggtc gatcccattt tgagaagaca tggcctgctc ccatcctccc
                                                                    960
tgaagaggat cgccgtgggc atgttctttg tcatgtgctc rgcctttgct gcaggaattt
                                                                   1020
tggagagtaa aaggctgaac cttgttaaag agaaaaccat taatcagacc atcggcaacg
                                                                   1080
tegtetacea tgetgeegat etgtegetgt ggtggeaggt geegeagtae ttgetgattg
                                                                   1140
ggatcagcga gatctttgca agtatcgcag gcctggaatt tgcatactca gctgcccca
                                                                   1200
agtccatgca gagtgccata atgggcttgt tctttttctt ctctggcgtc gggtcgttcg
                                                                   1260
tgggttctgg actgctggca ctggtgtcta tcaaagccat cggatggatg agcagtcaca
                                                                   1320
cagactttgg taatattaac ggctgctatt tgaactatta ctttttcctt ctggctgcta
                                                                   1380
ttcaaggagc taccctcctg cttttcctca ttatttctgt gaaatatgac catcatcgag
                                                                   1440
accatcagcg atcaagagcc aatggcgtgc ccaccagcag gagggcctga ccttcctgag
                                                                   1500
gccatgtgcg gtttctgagg ctgacatgtc agtaactgac tggggtgcac tgagaacagg
                                                                   1560
caagacttta aattcccata aaatgtctga cttcactgaa acttgcatgt tgcctggatt
                                                                   1620
gatttettet tteeetetat ecaaaggage ttggtaagtg eettaetgea gegtgtetee
                                                                   1680
tggcacgctg ggccctccgg gaggagagct gcagatttcg agtatgtcgc ttgtcattca
                                                                    1740
aggtctctgt gaatcctcta gctgggttcc cttttttaca gaaactcaca aatggagatt
                                                                    1800
gcaaagtctt ggggaactcc acgtgttagt tggcatccca gtttcttaaa caaatagtat
                                                                    1860
1920
atttaagaaa gtgaggattt ttttttttt aaagataaaa gcatggtcag atgctgcaag
                                                                    1980
gattttacat aaatgccata tttatggttt ccttcctgag aacaatcttg ctcttgccat
                                                                    2040
gttctttgat ttaggctggt agtaaacaca tttcatctgc tgcttcaaaa agtacttact
                                                                    2100
ttttaaacca tcaacattac ttttctttct taaggcaagg catgcataag agtcatttga
                                                                    2160
gaccatgtgt cccatctcaa gccacagagc aactcacggg gtacttcaca ccttacctag
                                                                    2220
tcagagtgct tatatatagc tttattttgg tacgattgag actaaagact gatcatggtt
                                                                    2280
gtatgtaagg aaaacattct tttgaacaga aatagtgtaa ttaaaaataa ttgaaagtgt
                                                                    2340
taaatgtgaa cttgagctgt ttgaccagtc acatttttgt attgttactg tacgtgtatc
                                                                    2400
tggggcttct ccgtttgtta atactttttc tgtatttgtt gctgtatttt tggcataact
                                                                    2460
ttattataaa aagcatctca aatgcgaaat ccaaaaaaaa aaaaaaaaa aaaaaa
                                                                    2516
<210> 1254
<211> 2556
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
 <222> (72)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (141)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (294)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (303)
 <223> n equals a,t,g, or c
 <400> 1254
 attctacagc agaatatact tggaaaaact caagtttttc cacatacttg gaaaaactct
                                                                      60
 ctagcatttg tnggaattta gtgtaattaa gtgaaaccta cctagcaact gtagtaatta
                                                                     120
 aaagcgtggg gtgtgctttt ngttgagatc cgtgaatgtt tctgtaaaca caattttgat
                                                                     180
 tgtgttgcgc ttcttaaagg ttgtgatgac aacggtaatt ttaaccactt gaccgtatat
                                                                     240
 cgttttcatc cttgaagact gtcatatatt tccaagtgtc tttcctccct ggtnatttta
                                                                     300
 ggntaaagat cgaggtccgg aagccaccta ggagattttt taattggttt tattggagca
                                                                     360
```

<220>
<221> SITE
<222> (303)

```
ttaacctggg agcgatcctg tcgttaggtg gcattgccta tattcagcag aacgtcagct
                                                                   420
                                                                   480
ttgtcactgg ttatgcgatc cccactgtct gcgtcggcct tgcttttgtg gycttcctct
gtggccagag cgttttcatc accaagcctc ctgatggcag tgccttcacc gayatgttca
                                                                   540
agatactgac gtattcctgc tgttcccaga agcgaagtgg agagcgccag agtaatggtg
                                                                   600
aaggcattgg agtctttcag caatcttcta aacaaagtct gtttgattca tgtaagatgt
                                                                   660
ctcatggtgg gccatttaca gaagagaaag tggaagatgt gaaagctctg gtcaagattg
                                                                   720
tecetgtttt ettggetttg atacettaet ggacagtgta tttecaaatg cagacaacat
                                                                   780
atgttttaca gagtcttcat ttgaggattc cagaaatttc aaatattaca accactcctc
                                                                   840
acacgetece tgeageetgg etgaceatgt ttgatgetgt geteateete etgeteatee
                                                                   900
ctctgaagga caaactggtc gatcccattt tgagaagaca tggcctgctc ccatcctccc
                                                                   960
tgaagaggat cgccgtgggc atgttctttg tcatgtgctc rgcctttgct gcaggaattt
                                                                  1020
tggagagtaa aaggctgaac cttgttaaag agaaaaccat taatcagacc atcggcaacg
                                                                  1080
tegtetacea tgetgeegat etgtegetgt ggtggeaggt geegeagtae ttgetgattg
                                                                  1140
ggatcagcga gatctttgca agtatcgcag gcctggaatt tgcatactca gctgcccca
                                                                  1200
agtccatgca gagtgccata atgggcttgt tctttttctt ctctggcgtc gggtcgttcg
                                                                  1260
tgggttctgg actgctggca ctggtgtcta tcaaagccat cggatggatg agcagtcaca
                                                                  1320
cagactttgg taatattaac ggctgctatt tgaactatta ctttttcctt ctggctgcta
                                                                  1380
ttcaaggagc taccctcctg cttttcctca ttatttctgt gaaatatgac catcatcgag
                                                                  1440
accatcageg atcaagagee aatggegtge ceaccageag gagggeetga cetteetgag
                                                                  1500
gccatgtgcg gtttctgagg ctgacatgtc agtaactgac tggggtgcac tgagaacagg
                                                                  1560
caagacttta aattcccata aaatgtctga cttcactgaa acttgcatgt tgcctggatt
                                                                  1620
gatttettet tteeetetat ccaaaggage ttggtaagtg cettaetgea gegtgtetee
                                                                  1680
tggcacgctg ggccctccgg gaggagagct gcagatttcg agtatgtcgc ttgtcattca
                                                                  1740
aggtetetgt gaateeteta getgggttee etttttaca gaaacteaca aatggagatt
                                                                  1800
gcaaagtctt ggggaactcc acgtgttagt tggcatccca gtttcttaaa caaatagtat
                                                                  1860
1920
atttaagaaa gtgaggattt ttttttttt aaagataaaa gcatggtcag atgctgcaag
                                                                  1980
gattttacat aaatgccata tttatggttt ccttcctgag aacaatcttg ctcttgccat
                                                                  2040
gttctttgat ttaggctggt agtaaacaca tttcatctgc tgcttcaaaa agtacttact
                                                                  2100
ttttaaacca tcaacattac ttttctttct taaggcaagg catgcataag agtcatttga
                                                                  2160
gaccatgtgt cccatctcaa gccacagagc aactcacggg gtacttcaca ccttacctag
                                                                  2220
tcagagtgct tatatatagc tttattttgg tacgattgag actaaagact gatcatggtt
                                                                  2280
gtatgtaagg aaaacattct tttgaacaga aatagtgtaa ttaaaaataa ttgaaagtgt
                                                                  2340
taaatgtgaa cttgagctgt ttgaccagtc acatttttgt attgttactg tacgtgtatc
                                                                  2400
tggggcttct ccgtttgtta atactttttc tgtatttgtt gctgtatttt tggcataact
                                                                  2460
2520
                                                                  2556
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa actcga
 <210> 1255
 <211> 2127
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> SITE
 <222> (72)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (141)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (294)
 <223> n equals a,t,g, or c
```

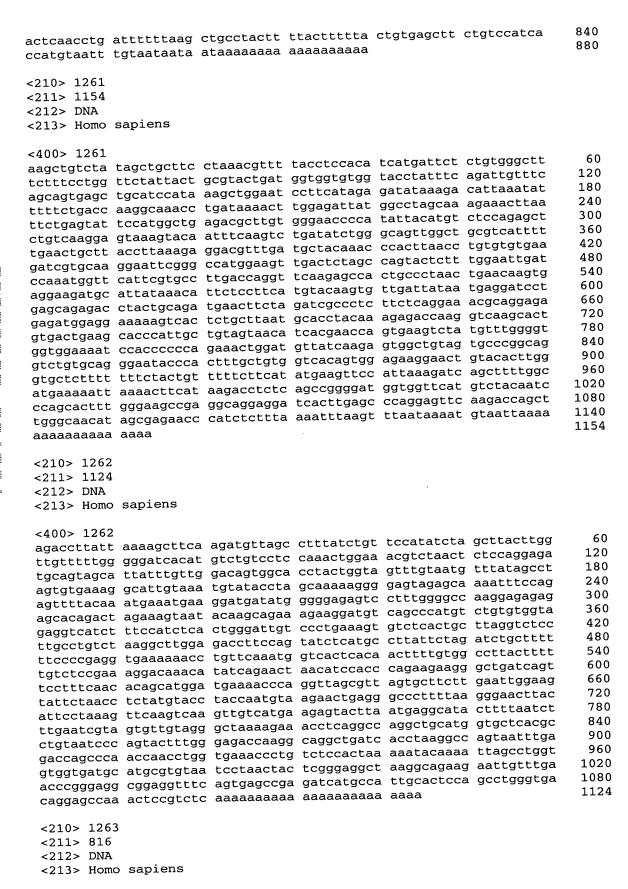
```
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1938)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2045)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2117)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2121)
<223> n equals a,t,g, or c
<400> 1255
attctacagc agaatatact tggaaaaact caagtttttc cacatacttg gaaaaactct
                                                                       60
ctagcatttg tnggaattta gtgtaattaa gtgaaaccta cctagcaact gtagtaatta
                                                                       120
aaagcgtggg gtgtgctttt ngttgagatc cgtgaatgtt tctgtaaaca caattttgat
                                                                       180
tgtgttgcgc ttcttaaagg ttgtgatgac aacggtaatt ttaaccactt gaccgtatat
                                                                       240
cgttttcatc cttgaagact gtcatatatt tccaagtgtc tttcctccct ggtnatttta
                                                                       300
ggntaaagat cgaggtccgg aagccaccta ggagattttt taattggttt tattggagca
                                                                       360
ttaacctggg agcgatcctg tcgttaggtg gcattgccta tattcagcag aacgtcagct
                                                                       420
ttgtcactgg ttatgcgatc cccactgtct gcgtcggcct tgcttttgtg gycttcctct
                                                                       480
gtggccagag cgttttcatc accaagcctc ctgatggcag tgccttcacc gayatgttca
                                                                       540
agatactgac gtattcctgc tgttcccaga agcgaagtgg agagcgccag agtaatggtg
                                                                       600
aaggcattgg agtctttcag caatcttcta aacaaagtct gtttgattca tgtaagatgt
                                                                       660
ctcatggtgg gccatttaca gaagagaaag tggaagatgt gaaagctctg gtcaagattg
                                                                       720
 tecetgtttt ettggetttg atacettaet ggacagtgta tttecaaatg cagacaacat
                                                                       780
 atgttttaca gagtcttcat ttgaggattc cagaaatttc aaatattaca accactcctc
                                                                       840
 acacgetece tgeageetgg etgaceatgt ttgatgetgt geteateete etgeteatee
                                                                       900
 ctctgaagga caaactggtc gatcccattt tgagaagaca tggcctgctc ccatcctccc
                                                                       960
 tgaagaggat cgccgtgggc atgttctttg tcatgtgctc rgcctttgct gcaggaattt
                                                                      1020
 tggagagtaa aaggctgaac cttgttaaag agaaaaccat taatcagacc atcggcaacg
                                                                      1080
 tegtetacea tgetgeegat etgtegetgt ggtggeaggt geegeagtae ttgetgattg
                                                                      1140
 ggatcagcga gatctttgca agtatcgcag gcctggaatt tgcatactca gctgcccca
                                                                      1200
 agtccatgca gagtgccata atgggcttgt tctttttctt ctctggcgtc gggtcgttcg
                                                                      1260
 tgggttctgg actgctggca ctggtgtcta tcaaagccat cggatggatg agcagtcaca
                                                                      1320
 cagactttgg taatattaac ggctgctatt tgaactatta ctttttcctt ctggctgcta
                                                                      1380
 ttcaaggagc taccetectg etttteetea ttatttetgt gaaatatgae cateategag
                                                                      1440
 accatcagcg atcaagagcc aatggcgtgc ccaccagcag gagggcctga ccttcctgag
                                                                      1500
 gccatgtgcg gtttctgagg ctgacatgtc agtaactgac tggggtgcac tgagaacagg
                                                                      1560
 caagacttta aattcccata aaatgtctga cttcactgaa acttgcatgt tgcctggatt
                                                                      1620
 gatttettet tteeetetat eeaaaggage ttggtaagtg eettaetgea gegtgtetee
                                                                      1680
 tggcacgctg ggccctccgg gaggagagct gcagatttcg agtatgtcgc ttgtcattca
                                                                      1740
 aggtctctgt gaatcctcta gctgggttcc cttttttaca gaaactcaca aatggagatt
                                                                      1800
 gcaaagtctt ggggaactcc acgtgttagt tggcatccca gtttcttaaa caaatagtat
                                                                      1860
 cacctgette ccatagecat ateteactgt aaaaaaaaaa attaataaac tgttaettat
                                                                      1920
 atttaagaaa gtgaggantt tttttttt taaagataaa agcatggtca gatgctgcaa
                                                                       1980
 ggattttaca taaatgccat atttatggtt tccttcctga gaacaatctt gctcttgcca
                                                                       2040
 tgaanttgaa aaggctggta gtaaacacat ttcatctgct gcttcaaaaa gtacggggct
                                                                       2100
                                                                       2127
 ttttggccca aaagccntcc ntacggg
```

<210> 1256

```
<211> 1105
<212> DNA
<213> Homo sapiens
<400> 1256
ggcacgagga acagaaacca gagcacagaa aatctttaat gttcagactg catcacagtg
                                                                      60
cttccgatac aagcgacaaa aatcgagtta aaagcagatt aaagaagttt attacccgaa
                                                                     120
gaccttccct gaaaactctg caagaaaaag gacttattaa agatcaaatt tttggctctc
                                                                     180
atctgcacaa agtgtgtgaa cgtgaaaatt ccacagttcc gtggtttgta aagcaatgca
                                                                     240
ttgaaggctg ttgagaaaag aggtctagat gttgatggaa tatatcgagt ttagtgggca
                                                                     300
atctggcaac aatacagaag tttaagattt attgtcaacc aagtcgtttc tggaatacca
                                                                     360
gcccttctat cagaactgga tggagacctg tggacacccc taagtaagct gcagattttt
                                                                     420
cacagtggtc atttgacctc cagagcaagc caataatttg tcacttcatt aaactgaaga
                                                                     480
gaagctgaat ttggacgaca gccagtggga ggacatccac gttgtcaccg gagcactgaa
                                                                     540
gatgtttttc cgggagctgc ctgagccgct cttcccttac agtttctttg agcagtttgt
                                                                     600
ggaagcgatc aaaaagcaag acaacaacac aagaattgaa gctgtaaaat ctcttgtaca
                                                                     660
aaaactccct ccgccaaatc gtgacaccat gaaagtcctc tttggacatc taactaagat
                                                                     720
agtggccaaa gcctccaaga acctcatgtc cacgcaaagc ttggggattg tatttggacc
                                                                     780
taccettetg egagetgaaa atgaaccagg aaacatggeg atceacatgg tetaccagaa
                                                                     840
ccagatagct gagctcatgc tgagtgagtt cagtaagatc ttcggctcag aggaagactg
                                                                     900
acagacaaga caagctactg aatacgttca catctgtctt gatgcctaat atttttacat
                                                                     960
ttctgtaaac atatttctga aatatttttt gcctttcaag cgacagatgc ctcattttgt
                                                                    1020
gaaaacttaa tgatgatttt gtgtttaagt tccaaacatt tgaataaaat aattgacaat
                                                                    1080
                                                                    1105
aaaaaaaaa aaaaaaaaaa aaaaa
<210> 1257
<211> 1274
<212> DNA
<213> Homo sapiens
<400> 1257
ggctgatctc aaactcctga rctcaagtga tctgcctgcc tcagcctccc aaagtgctgg
                                                                      60
gattacaggc atgagccacc gcgcccggcc tgaaagcatt ttagaaggct cctgactgaa
                                                                     120
agaacgggat aaagtaaggg ggtatgggaa cagaagatga cagcctggta tatctgggtg
                                                                     180
acatgcgtag gcagtctgtt gtagtggcaa ttgtcagggc tctggagtta gactgtcttc
                                                                     240
 tttcaaatct tgcaagctgt ctgatctcgg gcgatttact taacctctct gagagttctg
                                                                     300
 taaagtggag aataagaata ccaccctaca gatgatgagg attcaatgag attgggctgg
                                                                     360
 atacaaatca gcttttgttg gcatcagctt gagaggaggg atggacttgg gagtggagag
                                                                      420
 ggtggatttg ggggagagga cgccacacag tggcaggaac tcgcagcagg tgactgagag
                                                                      480
 tggaaggcac aagagagccc agatgctgag ccagctcaga atagaaacgg tattgatagc
                                                                      540
                                                                      600
 agaatgcaaa gcagtatcac tcgaatgacg gatgtttaat tggatttctc cagggctgac
 tetteattgt cacctacect ggeataceae acceatteet aatatttgte teageteece
                                                                      660
 cttctctctr agtgcctgga atcttttcct gacccctcca agttgtgccc tcccctgtaa
                                                                      720
 gttgcatctc gatttgagca gccttctccc agactatcct gatctctgtc ttccttgaac
                                                                      780
 tecagteact ggetggaget tteacagtee cagtegagag catgggetea gateagaetg
                                                                      840
 cccgagttca agttcctacc acttactctg tgacgttgaa caagttcttt atcctgtcta
                                                                      900
 agagataata ataatagtcc ttacctcata gagttgctgc aagagttcac tgagatgatt
                                                                      960
 tgtgtaaaat gcttaatcca gagcctgaca ccaatcatat gaaagcattc aataagtact
                                                                     1020
 agcaattata cttctgtatt gkttgatgtt tttatagtga gaccatattt atgtaatatt
                                                                     1080
 tgtataattt tttaaataga ccaagctggg tgtggtggta tatgcctgtg ttcccagcta
                                                                     1140
                                                                     1200
 cttgggaggc tgaagcagga gaatcgcctg aacctgggag gtgaggttgc agtgagccaa
 1260
                                                                     1274
 aaaaaaaact cgag
 <210> 1258
 <211> 1491
 <212> DNA
 <213> Homo sapiens
 <400> 1258
 ggcacgagat tcagagcaac agcgggctat ggcgccccgg cgcttgcacc aacatcacca
                                                                       60
```

```
120
cagagaaccc agcggccctg gtggtggtgc tgatggcggt gctgctgctc ctggccttgc
                                                                    180
tgaccgcagc cctcatcctt taccggaggc gccagagcat cgagcgcggg gcctttgagg
                                                                    240
gtgcccgcta cagccgcagc agctccagcc ccaccgaggc cactgagaag aacatcctgg
                                                                    300
tgtcagacat ggaaatgaat gagcaacaag aatagagcca ggcgcgtggg cagggccagg
                                                                    360
gegggaggag etggggaget ggggeeetgg gteagtetgg ecceecaca getgeetgte
                                                                    420
cagttggcct atggaagggt gcccttggga gtcgctgttg ggagccggag ctgggcagag
                                                                    480
cctgggctgg tggggtgcca ccctcccaca agggctgggc tgagacccag ctgagtgcag
                                                                    540
cgtggcgttt ccctttctgg gggggcctga ggtcttgtca cctggtcctg tgccccaca
                                                                    600
ggaaccagag gtaggatggg agggggaacg agagcetett tetececaga geeeceggee
                                                                    660
caggcctgtt gatccgcgcc ccaggacccc cttctttgca gagcccgagg agcctcccct
                                                                    720
gtcccctcgg gcagatctgt tgtgtctctc ttcccacctg gcagcctcag ctctgtgccc
                                                                    780
ctcaccetge tecetetege ceettetete ecacceette ettetgagee gggeeetggg
                                                                    840
gattggggag ccctcttgtt cctgatgagg gtcagctgag ggggctgagc atccatcact
                                                                    900
                                                                    960
cctgtgcctg ctggggtggc tgtggggcgt ggcaggaggg gcctaggtgg gttgggcctg
agaaccaggg cacgggtgtg gtgtctgctg ggctggagat aagactgggg agagacaccc
                                                                    1020
caacctccca gggtgggagc tgggccgggc tgggatgtca tctcctgccg ggcgggggag
                                                                    1080
ggctctgccc ctggaagagt cccctgtggg gaccaaaata agttccctaa catctccagc
                                                                    1140
tectggetet ggtttggage aaggggaagg gttgecagag teetggggge eecagaggag
                                                                    1200
caggagtctg ggagggccca gagttcaccc tctagtggat ccaggaggag cagcacccga
                                                                    1260
gccctggagt ggcccagtac ccttccaaga ggccacagtc ccagccagga caaagtatgc
                                                                    1320
ggcccatcct ggtgcgacag cgtgggacaa tgtgaacatg gactcgaaga catggccctt
                                                                    1380
tctctgtagt tgattttta aatgtgccat tattgttttt aaaaaaaag gaaaaaagaa
                                                                    1440
                                                                    1491
aagcaaacaa ataaaacacc tttaagaggc ttgaaaaaaa aaaaaaaaa a
<210> 1259
<211> 3045
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
 <222> (128)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (141)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (739)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (770)
 <223> n equals a,t,g, or c
 <400> 1259
 cccagaattg tccctccaaa gcccccaccc cataaaagcc attgtcctcc tcctccgacc
                                                                      60
 cttctggtat ccttgttaag agagcctttt ccactgtgag gaagtgtgga aaaatagcct
                                                                     120
 ctgtgtgngt gtgtgtgtt ntgtgtgtgt gtgtgtaatc tgttaggttg gggataggtt
                                                                     180
                                                                      240
 ttctgctagc caatattaaa agagacctgc aataaaaaaa ttaccctgat ctgatagaaa
 gcaagtgttt ttgtatgtgt gggtgaatgt gtgttcatgc ccgtatatgt ctacacacag
                                                                      300
                                                                      360
 atgacaaatt atatttgaaa tcgttggaaa ataaattcag atcaaaatgc ctttcaggcc
 cattacctag aaatctatct taaaacctgg gtatgttcct aaggtcattt ctttgcttat
                                                                      420
 gctaaattaa ttacaattat gaatggagga tattctactg tactttttta aaaagaaact
                                                                      480
 atttttgtgt ttgaaagtga aaccaacatc cagatctata gcagagtcct tattcttctc
                                                                      540
 ataaatettt ttaetttgge tacaaataga tgatggtatg attetattat atatttwata
                                                                      600
```

| | ccaaattaag | ++++~~~+>> | atatattatt | taatctgaac | tatagtaact | 660 |
|-------------|--------------|--------------|--------------|----------------|--------------|------|
| taaaatccat | aacaatagtt | coctaggicaa | gegegeegee | ccacagatgt | aattatgttt | 720 |
| taatactcta | aacaatagtt | cactccattt | ggccccccc | aattovattn | aacactgaaa | 780 |
| tcaactcagg | aactatggnc | aaggaacttt | aggettet | ctcactgaaa | ggcagaactc | 840 |
| tacaagtcat | ccatgcacag | CCactatcat | testtesses | tatttagaa | dasadddds | 900 |
| agaacctgtt | attttatgtc | tgtaatcatg | actitiggea | taaaaaata | gaaaggggca | 960 |
| ggataactca | ctggaatgta | cagtattttg | ctagtgcatt | tagaactata | tagatactac | 1020 |
| cagtaacaac | ccacaccgtc | ttccttcagg | gattteeaac | cggcactctg | tactttaata | 1080 |
| acagaatgca | atttaatgga | tatttctcag | cctggtteag | aataaattya | ttagagagaa | 1140 |
| ccagaaagta | tatactgaag | tgtgggataa | agattatgat | Laggygaggg | ttggagacaa | 1200 |
| aagctgtaaa | ttactatggc | tgatttattt | ctactatata | catatatatt | | 1260 |
| gtatatccta | tataggaaac | taagcattgt | attttttta | acaaatctaa | aaaagcacta | 1320 |
| tgaactacag | gtgtttgact | ttcaaaatat | attttgtatt | gttaatatct | tcacattgtg | 1320 |
| tgaatactgg | aagctgcaga | tctttgctag | gacgcaataa | atttatatac | tttttgaggg | |
| attattataa | ggtgctaatc | aggcccctgt | tatgcttagg | gggagccctg | gtgctacttg | 1440 |
| cttgaagttt | tcagtgtaag | taccctgatg | ccttttggac | cttgggatca | gatcaagagt | 1500 |
| tttggagatc | aggtaccaag | gaaataagga | cagtctagct | gcctcaagtg | aggggcccii | 1560 |
| tocataocto | tccttcccc | tcactgaagc | tgggtagcct | attggggttg | agagggaaaa | 1620 |
| tataaaatct | cagaatttat | ctcccttaga | agagagccag | taacttatgt | acaaggatga | 1680 |
| aagaaaggtc | gcagcagtag | ctttggggaa | agggaggaag | atatggcact | tctccaaccc | 1740 |
| cogaaaacat | tgcttttgaa | aactgctgat | aaaatatgag | ccggttatta | cttctgtttg | 1800 |
| ggagactgtg | ctctctataa | tgcctctctt | ggctctactc | cacagatacc | agacctcttc | 1860 |
| taagaggatg | agcagaccag | ctttgaggtt | gacctgtttc | tetttgtetg | ccttcccaaa | 1920 |
| acaccadece | ccaggaagac | attaagcagc | cttaagctta | aattcctact | ccctcttcca | 1980 |
| aatttaactc | acttgcctta | gatccaaggc | agggaaagga | aaagaagggg | ggtctctggc | 2040 |
| tttattactc | ccctaagtct | ttactctgac | ttccccaaac | ccagaaagat | tttctccaca | 2100 |
| gtgttgattt | gaaagaggag | tattttqtcc | cattttcccc | ttcctcatta | tcaaacagcc | 2160 |
| gegeeetetee | ttgtctctgc | taagaaagta | gaggcatgat | gatctgcctc | tcaactgccc | 2220 |
| taagteetee | ctaagtatca | ggggaaaaaa | aaaaaaaaaa | agcctaacaa | atgggattag | 2280 |
| caagtcccag | caagtagtga | ggggttttgtt | gatacctctg | ctaggatgtg | tgctttccca | 2340 |
| actagggctg | tcaggaatta | cactatacct | tttccccagg | gatatgggct | ctgtctaccc | 2400 |
| tatettgeet | tttcccggta | actoctctto | aacattgtgg | acaagggcag | gtcttcatat | 2460 |
| agtgeteeag | ccctttctcc | gagtgaaatg | ccatagccct | tacctagagt | ctagggcaca | 2520 |
| ttttgatcat | ggaagataca | cagegaaace | cctgaggaga | catctacaca | caccagtggc | 2580 |
| aagacttcgg | ggaagataca | ccgagaccga | agtetateat | cctctggaag | ggatgggtgg | 2640 |
| agctgcccca | gggcctgctt | | agtetgteat | ctcttaacac | tagcaataac | 2700 |
| tgctccaatc | tctggtgcct | aaaaacccaa | tattaataat | ctcatactat | atttatttta | 2760 |
| cagtccacac | cactgttgcc | ttttaaaacc | ccctaacaac | ttttaaatgo | gtttgttttg | 2820 |
| attccaatcc | aattatcacc | agggctgtgt | gggtaaatgt | actaatetto | tecetaagta | 2880 |
| tgktcttccc | cctcacccc | cactcttagg | tatgtatgat | tactactec | tccctaagta | 2940 |
| agtttcttcc | tgctcctttt | gtatetteet | ttettgtett | egenegatta | ttttgtctct | 3000 |
| tggtgttttg | ggacttttt | tttttttt | ggeetttgt | acaaayatta | gtttcaatgt | 3045 |
| agtctgtago | ctcctttgta | aaccaattaa | aaagttttt | aataa | | 3043 |
| | | | | | | |
| <210> 1260 |) | | | | | |
| <211> 880 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1260 |) | | | | | 60 |
| ggaaggagto | c agatgggtat | : ttaaggagtt | tgcaaccctc | gtgtcctgct | gtcctggaca | |
| atgetetgta | a gatacttcct | : ctgccaaaaa | a ggaactggtg | gccttgcct | ceteteetgg | 120 |
| acacctggg | r tcaaaqqtca | a ctgccaaata | a gacagctaga | actggggtt | acctaagcat | 180 |
| cccttgagat | t gtacaacctt | : ctaggaggag | c attectects | , cctgccccc | c tccccgcaag | 240 |
| aggictiti | aggaataact | gaaaaaccca | a tggggtttgt | : ggtcctgctg | g ctctgccaag | 300 |
| tecetetta | acaactaaa | : tgaggactgg | g aacattctgt | : ggcaagcagg | g aggeeteage | 360 |
| agagatcaco | aagacccag | c acacctggtg | g cagacagcca | e cggcatccto | cttcctgcag | 420 |
| gtcaccccc | a cgagccactt | : aacctctcag | g agcctctgct | tctcacctg | caagigigig | 480 |
| aggtagggta | a ccaqttaqto | c acggtactt | g ctgtctcaca | a gaggagccga | a caggigagaa | 540 |
| cagtgtgca | t atagatataa | a acactcagt | g tggaaagcag | g gtgtgtgtg | attcaatccc | 600 |
| ccaatggtg | t caagggctco | c tcaaaatgc | c atgggtccc | aggtcattg | gataaacact | 660 |
| gtcccatc | c tactataati | t gtggctggaa | a ggtccctcaa | a ggagtagaci | t gteeetgaga | 720 |
| acaacatoo | a tacadaata | tgacgagtt | c aagcatagct | agagttact | g ttttttagca | 780 |
| acaagacgg | | , -99 | | | | |



```
<220>
<221> SITE
<222> (720)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (735)
<223> n equals a,t,g, or c
<400> 1263
gacacgaggt cactccaaaa agaaaccctg tacccactag cagtcaccca tttcctccat
                                                                      60
cettececat ecceageeet aggeaaceat etgttttetg tetetacaga tttgeetatt
                                                                     120
caagacattt catataaatg gaatcatacg atatgtggtc ctttgtgact ggtgtctctc
                                                                     180
acttaacata gcgtttttaa gatccatcca tgttgtagca tgtatcagta ctacattcca
                                                                     240
cttcattgtt taataataat aataataata gttcattgta tgggaatacc acgtttgtga
                                                                     300
ctggcttctc tcacttagca tagtgttttt aagatccatc catattgtag cattatcagt
                                                                     360
atacattcca cttcattgtt tgaataataa taatacttca ttgtgtgggt ataccacatt
                                                                     420
tatccattta tcagttgatg gatatttgag ctgtttccac tttttagcaa ttatgaataa
                                                                     480
tgcctcatct aacactttga ttatactttt tattatcata tgtgtggctt caggtttttg
                                                                     540
tttggttggt tggttttgcc tgtgtctgtt tttatcactt gattataaac ttctggaaaa
                                                                     600
agatcattat tttcactctg aaatttccat acagcaagta ttcaataagt gtttggcaga
                                                                     660
tggatgaatg ggcagatatt ataggttctt accatgttga ttatgaagaa gtacaaagtn
                                                                     720
780
                                                                     816
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa
<210> 1264
<211> 1232
 <212> DNA
 <213> Homo sapiens
 <400> 1264
 ggcagcctga tgggaggagc tgtcaggtcc gggacctttg caatggcgtg gaccatggct
                                                                      60
 gtgagttcca gtgtgtgagc gagggcctct cctaccgctg cctgtgcccc gaggggcggc
                                                                     120
 aacttcaggc agatggcaag agctgcaacc ggtgccggga aggccacgtg gaccttgttc
                                                                     180
 tgctggttga tggctccaag agcgtgcgtc cacaaaactt cgagctagtg aagcgcttcg
                                                                     240
 tgaaccagat tgtggacttc ctagatgtgt cccccgaggg cacgcgggtg gggctggtgc
                                                                     300
 agttctcgag ccgcgtgcgc accgagttcc ctctgggtcg ctacggcacc gcagccgagg
                                                                     360
 tgaagcaggc ggtcctggcc gtggagtaca tggaacgcgg caccatgaca gggctggcgt
                                                                     420
 tgcggcacat ggtggagcac agcttctcca aggcgcaggg tgcacggccc cgtgccctta
                                                                     480
 acgtgcctcg tgttggcctg gtcttcacgg atggccgctc ccaggatgac atctcggtgt
                                                                     540
 gggcagcgcg cgccaaggag gaaggcatcg tcatgtacgc cgtgggcgtg ggcaaggcgg
                                                                      600
 tggaggcgga gctgcgcgag atcgcctcgg agccagcgga actgcacgtg tcctatgccc
                                                                      660
 cggacttcgg caccatgacg cacctgctgg agaacctcag aagcagcatc tgtccagagg
                                                                      720
 agggcatcag cgcagggaca gagcttcgga gcccatgcga atgcgaaagc ctcgtggagt
                                                                      780
 tecagggeeg caegetgggg gegetegaga geetgaeget gaacetggee cagetgaegg
                                                                      840
                                                                      900
 cgcgcctgga ggatctggag aaccagctgg ccaaccagaa gtgagggtca cggacggccc
 agacccgggc tggggcgcgg caccacggac ggtgcccctt gcgcgccatc ggtgcgccgg
                                                                      960
 ggccaggcag aacctgggcc cgtccggctt gggctgtcgg ggcggaggcg ctggcgggct
                                                                     1020
 tccggcattg agctgagttg gcctcgcccg gaccattagg cggactgcgg cgtcaggggg
                                                                     1080
 atagcgggtg gtgagggaag gggcacgtgc tagaccggca cgccctcgcc gcgtgtgcgc
                                                                     1140
                                                                     1200
 tcagttcttt gttggatttc ttgtttgtgt tcttaaaaaa ataaaaaaaa ctgatttcca
                                                                     1232
 aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
 <210> 1265
 <211> 854
 <212> DNA
  <213> Homo sapiens
 <400> 1265
 ggcacgagaa gattagttgg aatttttgag aaccaggaga ggaagcacag gacgtatgtc
                                                                       60
```

| | | | ~~a+~~~ | attcacttaa | cattogaagg | 120 |
|--------------------------|--------------|--------------|--------------|--------------|--------------|------|
| tatgtgctca | ttgtcactga | agtgctggaa | gactyggaag | tacagtata | caaacccqtq | 180 |
| aagagggaat | ggtttaaaat | agaagacgcc | acaaaagcgc | agaagaataa | caccccagts | 240 |
| caggcatcat | attttgaaac | attgaggcaa | ggetaeteag | ccaacaacgg | atractraar | 300 |
| gtggccacca | catactcggt | ttctgctcag | agetegatgt | caggicaticag | teceteteae | 360 |
| acttcctgta | agagaaatgg | aaattggaaa | ctagactgaa | gigcaaacci | cccccccc | 420 |
| cctggctctt | tccacttctc | acaggcctcc | tcttcaaat | aaggcatggt | ttattatat | 480 |
| ~~~~~~~ | attaata | ttactattta | gtgttaagtg | arggggcccc | CCCCCCGCC | 540 |
| tttattgagg | ataggaatta | ggtgtgtaat | ttgtaagtac | ttttgtgcat | gatetgteec | 600 |
| tecetetaac | cacccctgca | gtcctctgaa | gagaggccaa | cageetteec | ctgccttgga | 660 |
| ttatasaata | ttcctattta | tettateetg | gccctggcca | gacgttttct | ttgattttta | |
| a+++++++ | tttattaaaa | gataccagta | tgagatgaaa | acttccaata | attigiccia | 720 |
| tastatacta | tacacttcac | tagagtggtc | actttcactg | cagtatacat | Llattiatat | 780 |
| attatatatc | ggacatataa | tatgtaaata | aatgacttct | agaaagagaa | atttgaaaaa | 840 |
| aaaaaaaaaa | | | | | | 854 |
| aaaaaaaaa | | | | | | |
| <210> 1266 | | | | | | |
| <211> 2092 | | | | | | |
| <211> 2032 <212> DNA | | | | | | |
| <213> Homo | caniens | | | | | |
| <213> HOMO | saprens | | | | | |
| <400> 1266 | | | | | | |
| <400> 1200 | aatttgaagg | aatatgtggg | aattagtgac | ttaacaaaag | actacacaaa | 60 |
| ggcacgaggc | aacttgaage | ttaaaaaaaa | ctttaaacaa | aaatgccttt | ctttaagctt | 120 |
| catgaggatg | geetetace | tatatettta | ttatcacatt | gttattgtta | catgcactgg | 180 |
| aatttttata | atatettgea | attaccetca | ttatataaaa | tggaatacat | gattattcca | 240 |
| tgttttctct | ctggattaag | actyccatet | atttattaac | acatctgtgc | cagcactatt | 300 |
| tcacaactag | tgataataaa | aacagccaac | ccctatgage | tagatattgt | tatccctqtt | 360 |
| ctaaatgctt | aattttaatc | accacaacaa | attaaattaa | taacccaaaa | acaaacagct | 420 |
| tttcagatga | ggaagccgag | gcagagagaa | ctcaagttgt | tggcccaagg | agatetgaat | 480 |
| agtagacagc | agtcaaggca | gegtggetee | atggtgatgt | gcttggtcag | atootogoo | 540 |
| atataggact | tagatttgta | gactattgag | ctgtagactc | acciagacaa | atggtaccaa | 600 |
| gatattttag | tagataaaat | tctaggttag | tagaacatag | accacatgtt | tcaaaccttt | 660 |
| atcagttgat | ggaagaaaaa | tggttttaca | agttatttt | aggateteta | tcaaaccttt | 720 |
| acttctccct | ctaattacag | atcccacttc | cagccgggcc | : cclcatgrat | ccactggccg | 780 |
| accgcagagt | gtccctacct | cctctccaga | gcatcattcc | tttetately | ctgccagagc | 840 |
| cacggtgcca | tttactccaa | ggactcactt | tctaaaattc | cacacctgga | gtgacctcta | 900 |
| gtcgctcagc | atccactttg | tgtctccaaa | ttgtgtagga | ctctgtaatc | ttttgattag | 960 |
| +++a+aaaaa | aacacaatga | agcacttcac | : ttttttttat | t caaagccat | ttaataaaac | 1020 |
| acacttcctc | agcccagtgc | : aaagcttgta | tctgccacca | a gtacatacca | ttggttetet | 1020 |
| tasttaatta | gaccaactto | tcaggtggct | ttagacctca | a acaageegta | licitication | 1140 |
| tattatatat | tattaccata | aattaataaa | ı atqtttttct | ccaggatttt | ggtgagggtt | |
| agatataact | atcattttac | : acctcccaga | ı tttcaaagaa | a ttactggttt | taccatgact | 1200 |
| gaaatgttaa | gatgtgtttg | : tactattcac | r ttcctcaaa | : tgaagcilai | , iyaaaaaaaa | 1260 |
| atatatata | ttatttattt | · tattatagca | attattccta | a attaaagcag | , tatttaatyt | 1320 |
| aatttagagt | tatttctttc | r gagaatttta | tgtcattgt1 | t ccattaccti | gaalgilgga | 1380 |
| aagatatgat | acatactact | : tottcatcac | : aaaaatcag | t aagcacaata | a aagtggatge | 1440 |
| gaaaccatca | dacacataaa | a tattacaact | gtgtccctg | g atatggaata | agcayytata | 1500 |
| 22224255 | taattatadt | - tttattataa | a atataactta | a tgagaaaaa | a attigatagg | 1560 |
| aataataata | , tatattacta | a attittaact | : atccctaage | g caaaccttai | gacccacaga | 1620 |
| atttatat | atacagtatt | - cagtgcacac | a aaatcttat | g attggctcaa | g gtacagtaag | 1680 |
| ttaattataa | dtaaaactct | - caaqtetqaq | r tccatattt | g tagetetge | tiliggetgta | 1740 |
| aattaataa | , atcadaacto | r cttatgcctt | t togtttato | c ttggggtttg | g agagegetgt | 1800 |
| atttaggagg | cagtttaaaa | a atacattago | r agagagaaa | c cattaaaag | tttactgtta | 1860 |
| gagatattgt | - addtdctaat | t actogattto | c gtctcagat | t taatttett | taigggicig | 1920 |
| yayatatigi | , aggigetaan | ataaqtatq | t gttaatatt | t taattgtgt | a aaactcattt | 1980 |
| ctagicatio | , adcadatect | t actorator | r cattttcaa | c ctgttgcaa | t aactttgctg | 2040 |
| gttactttac | , ageolytaa | a aacttttct | t aaacaaaaa | a aaaaaaaaa | a aa | 2092 |
| aaatattaac | . acattaata | | | | | |
| 2010s 10C | 7 | | | | | |
| <210> 1267 <211> 1352 | | | | | | |
| | ٤. | | | | | |
| <212> DNA <213> Homo | n caniene | | | | | |
| <213> HOM | o pahremp | | | | | |

| <400> 1267 | | | | | | C 0 |
|---------------------|--------------|--------------|--------------|--------------------------|--------------|------------|
| ~~~~~~~ | tcattgagtg | taaatagtca | gatgaagaat 🖟 | gtatattctg | tttttaagct | 60 |
| asatattaat | catgggtgga | ttttaaaac | taatttttta | LLLLLCCatt | cacacacgac | 120 |
| | anttttaaca | tacadotata | tgagtattga | caaacagtee | Lagicitiged | 180 |
| agatgagga | cadattadda | acatttccat | cacccctaga | aatteeeteg | tgccccttg | 240 |
| ++ + + aa | atacatataa | dcaactacca - | atctattiqu | tgtccctgtg | gccccaggo | 300 |
| -++-++~~ | acctatttta | tttataaccc | cttttcacct | cctcttctgt | gtttttyttt | 360 |
| anagatacaa | tetetattt | cctactccac | acacaagucg | geetgettta | Clacecaae | 420 |
| sataataata | ctagaataga | atttctcaca | tcctcaatga | gatygayett | ggctgaatgt | 480 540 |
| anaganga anga | atctotttta | atgtttgcct | ttggttcctt | gctttgtatt | Lagagaaccc | 600 |
| ~+++aa++ac | ccagatgaat | ctctatttt | agggattgtg | acaguluaa | Cataggtgga | 660 |
| aataaaaat | cactggtgca | agacaacaaa | catgtttgac | actgatactt | LLCCaacccc | 720 |
| +~~~+ | assautecaa | agggagccaa | cctgttcatc | Laccaccige | caggageeeg | 780 |
| | catactacaa | atotttatoc | cctttqqqaa | tgttgtgttt | gccaaggccc | 840 |
| + + | gcagagaaac | ctgaggaagt | gttttggtat | gitggettet | Ctctggtgtc | 900 |
| aggataggat | tantattta | ccactgagaa | agaaggagct | Cactycagaa | agacccgaac | 960 |
| atgagtttgt | ggtgttgttt | taacttggcc | atgggcaggt | cattatgacc | tactacagag | 1020 |
| ccccagtttc | tcattgctgt | agtggaggta | aggatttcta | cccacactgt | agatttatac | 1080 |
| -~ | tatatogaaa | atggtttgca | aaaaaacctt | taaacagtee | aggittgege | 1140 |
| ctgtaagtcc | cagtacttgg | ggaggccaag | gcaggaggat | egettgagee | aggageeeg | 1200 |
| agaggaggt | gaggaagaga | ataaaacctc | atggctacaa | aaaactaytt | agacgeggeg | 1260 |
| ~~~tatacct | atattacaa | ctacttgagg | ctgaggtgag | ayyattactt | gageeeagga | 1320 |
| ggccaaggtt | gcagtgaacc | atggtcacac | cactgtactc | Caccerggge | gacagageaa | 1352 |
| gaccctgtct | caagaaaaaa | aaaaaaaaaa | aa | | | |
| | | | | | | |
| <210> 1268 | | | | | | |
| <211> 1658 | ; | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1268 | 1 | | | | | |
| attagggaga | adttgatcaa | tattaggaag | cttgctaatg | acactctcat | ccagaacttt | 60 |
| taasasatsa | r ddadaacta | acaaaataac | agagagccga | ggaatteeac | LLLLactage | 120 |
| asttasttt | · daataatctc | acttatttac | tcagtaaata | tatgitgett | gettaccata | 180 |
| + - + + + - + + + + | - antaantata | tatcacttac | tagateetgg | taatgacagt | . ggtgagtttt | 240 |
| attacattat | - tagtgggatc | tacagccacc | tataacttaa | gattettet | . cacacageee | 300 |
| | - acaacoctaa | gatetgaatg | cctatacccc | caaaaattca | llaayttyaaa | 360 |
| taataaaaa | - caaddtdatd | taaaaaatat | accaaaccct | gtccagaati | , ctygaattyt | 420 |
| ataggagat: | - ctttatctad | agactettig | tyctacticc | Ccacaagtt | . Cccacccag | 480 |
| tatttaatc: | a ttgagtgttt | ctacttataa | l tacttgttgc | aaagtcaat | acagicaaag | 540 600 |
| 224+4222 | a attoottact | ttggacttaa | ı caagcaaaıy | Cacticiage | geeeeega | 660 |
| 222662222 | r tacacctaag | tagagagett | : ctgtttttta | tagtgatta | , alyaayayta | 720 |
| ataaataaa | a accatcaaac | ctagaattag | agetetgggg | Licialactig | , cccaacgaa | 780 |
| tasttaats | a tataataatt | tcatccatqo | : tcttggctct | gtctgggau | , LCLCCLCCC | 840 |
| ~~~~~~~~ | + catttcadtc | atccaddccd | , agtttaatta | tgtataaci | j tottegetta | 900 |
| +++aaaaaa | r taaaacaaaa | - ataacaaaaa | i tactatagac | ; tgggtgttt | addicaccada | 960 |
| 201111111111 | c tracacttct | acadaccad | ı aataccaaga | i ttaggttate | glagatice | 1020 |
| ctggtgagg | a cctgcttctt | . agttcacaga | a cagcatette | ttgetgtge | c cttccatggt | 1080 |
| ataaggggt | a agagagctco | ctgagatcto | ttttagaagg | g gcactaatc | tattcatgag | 1140 |
| ggctycact | c tcacagscta | atgacctyco | c aaagggccca | goulcaaac | a ccatcacgac | 1200 |
| andatatas | a tttataaaaa | r atataaacat | t tcaqcctata | a godalaacc | a gatgttttg | 1260 |
| caaccaaga | t ggtgaattct | : tcctgagca | gtgccagtca | a gactecagg | a gagcagggat | 1320 |
| cccatgcac | t tatgtactto | catccatcto | acageetee | a cogotteda | g aaggttgagc | 1380 |
| tgcccccag | g taccaaagca | a aggactggaa | a tatagetgag | y ayatayada Fattaassa | t gttttgcaaa | 1440 |
| | a gagattgaga | acttaaacto | r atttcdatci | Cilyyyaaa | y adatatyaat | 1500 |
| tctaatctg | a tttcaatcto | tctggaaca | a aaaaccttt | t gracerate | t ttcttcaatg | 1560 |
| ~+~~~~ | a otaaaataco | - ttccaagcci | t ccactaatco | ; illitatiga | geeeeea | 1620 |
| ttcgtgatt | c agatgtgcct | tgtagacaa | y cacagatet | Lactycica | c ttctgccata | 1658 |
| aatgcttca | c aaattaaaa | a aaaaaaaaaa | a aaacteya | | | |
| | | | | | | |

<211> 638

```
<210> 1269
<211> 774
<212> DNA
<213> Homo sapiens
<400> 1269
tttaagttac aggataattc ctcccagtaa aactagcctc caaaggtttt aatggcaaaa
                                                                    60
tccaagtatt caaatctata atcagccttt taagcaggaa cttaaaatga catgacagtt
                                                                   120
ttaattatct tgttcttcgt ccaagagtca agtagtaggc atgagtacac tttttacatg
                                                                   180
                                                                   240
gcttatggtt ttacgttatc ttctaccaaa cagctgtttt gtacttaata ggcctagttt
ctgtaaccca tttggaactt cccccatcag ctgtcgaaag gcttcaagtt gagaaacact
                                                                   300
gcactgtggc ttcttcaaat ggcttttctt tttttgagat agggtctcaa tgtcacccag
                                                                   360
gctggagtgc agtggtgcca tcatggctca ctgcagcctc gacttcctgg gctcaagcca
                                                                   420
tececetate teteageete ecaagtaget gggaetaeag etegegeeae tgeacetage
                                                                   480
taaattttat attttttgga gagacggggt tttgccatgt tgctcaggct gatctttaac
                                                                   540
tcttgggctc aagcgatcca cctgccttag cctcccaaag tgctaggatt ataggcgtga
                                                                   600
accaccacgc caacctcaaa tggctttcct ttaaaatttc ttgagcctag tccgaagata
                                                                   660
gtgagttatc tcagttgatt gttcacagtc agttacagat tgaactcctt gttccactct
                                                                   720
                                                                   774
tttccccatt ctcactactg cacttgacta ttctttaaaa aaaaaaaaa aaaa
<210> 1270
<211> 411
<212> DNA
<213> Homo sapiens
<400> 1270
                                                                    60
cccacgcgtc cgacgtcttc ctgcgcgatc aaccctggta caaggcagct gtggcctggg
ccaaccagaa ccgggcacca gtactcagca tagaccctcc tgtgcatgaa gtcgaacagg
                                                                   120
gcattgatgc caaatggtca ctggcactgg gcctgcctct gccactgggg gagcacgcag
                                                                   180
geogtateta tttgtgegae attggeatte eccageaggt ettecaggag gtgggeatea
                                                                   240
actaccactc gccctttggc tgcaagtttg ttatcccact gcactctgct tagagggttc
                                                                   300
                                                                   360
ctgcgcaggc aggactctgc tgtcccctgc tgctcctgat aacaaacgcc ttaaggatat
                                                                   411
<210> 1271
<211> 779
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (709)
<223> n equals a,t,g, or c
<400> 1271
ccgaggagtc cgcccggaaa caaacattcc ccagggcaat gtcacgactt ggtcttcccg
                                                                     60
aggagccagt cagacagata cattgataac tccatttgtg ggtttaatag accacaactt
                                                                    120
ccaggcccag ccgaatcctg ctgaagttaa ggatgtattc ctggtgcctc tggcctattt
                                                                    180
 cctgcatcca caggtccatg accagcatta cgtcacacgt cttggtcacc gttttattaa
                                                                    240
 tcatatcttt gagtacacaa accctggaga cggtgtcact taccagatca agggaatgac
                                                                    300
 ggcaaacctt gcagtgttgg tggcctttat cattttggaa aaaaaaccca cctttgaggt
                                                                    360
 tcaatttaat cttaatgatg tattagcatc ctctgaagag ttattcctga aggttcataa
                                                                    420
                                                                    480
 aaaagctaca agcaggttat gatttactag agcaagagac aaagaactat tcacgaggat
 tctgtgtgtg cttattcgta gaacaacaac aatgccagct gttggaattt gacaggtgtg
                                                                    540
 aatatttttt ctgcagtatg tagttagaat ccttgcttct tttccagttg ccttctattg
                                                                    600
                                                                    660
 tctgaaaaag taaaagccat tcaaaaatga aaactatgtt catagtgttg catattttca
 cccacaatat gttaataata tttttcttac acatataata aagaatatnt ggcacatact
                                                                    720
                                                                    779
 <210> 1272
```

```
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (9)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (38)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (66)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (625)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (635)
<223> n equals a,t,g, or c
<400> 1272
tgccagtgng cccttggaac atccccactg catttcancc ccggggggat acagtgagac
                                                                      60
cettgnettt aaaaaaaaa atgeetgeaa acceeaaaaa taaatageee ataatttgee
                                                                     120
catctttgga gagattatgg agataatctc ccttgtctat tagcccacta gcatggctaa
                                                                     180
                                                                     240
ttgatcattg attggacctc attacataag ggggctgtgg acgtctttgg aatttgttag
gggaaggcta tgtggtaagc tctactaaat gtatctgtac aaggatgaag aaaaacaaaa
                                                                     300
taactactac ttttggagga aacttggaac aagaagagta catagtttga tccattccta
                                                                     360
cggtcgagtc taatcaattc catttcttag tgtatgcatc taatgaggct tacaacttgc
                                                                     420
 taaccccaaa agaagcaata aatgttaagc aattttagta accagtatgg catgtatctt
                                                                     480
 atttttgaat gcattcctcc ttatccccat cctcttagga atatggacgt tttactaagt
                                                                     540
 600
                                                                     638
 gatcccgsga ggggccccag gttantccaa agagntcc
 <210> 1273
 <211> 1055
 <212> DNA
 <213> Homo sapiens
 <400> 1273
 cgggtcgacc cacgcgtccg agacttgtca ttcagtaata ttagcagata gctgcttcga
                                                                      60
 taaaggaatt tggagtttaa aaatcaactt gtgaaaacaa ggttgttttt gtctttatcg
                                                                     120
 tttgttagag ttatagattt atgatttcat aggcttgatt ctatgtgaaa tatctttta
                                                                     180
 cttttatgca ttttaataag atttaaaaat atttagatta aagccccctt taatgagtac
                                                                     240
 aagaaaaact cttggcttgt tagaagaaag tatattcttt ctagaatttg gtgcaggaat
                                                                     300
 atgtgttcat atccaggcaa acgggtgtgt ttttatcttc agacaatgaa accttctcct
                                                                     360
 ctggggcttt gttgccagga agattagaac taaatttatt tttttcattt ctgtcatgaa
                                                                      420
 atcattccag atacctcttt tcttctttcc aaatggtttt cacatgtgtt tgaaatattt
                                                                      480
                                                                      540
 gtacttcgaa ttgtcggatt ttccatgtcc tcctttctcc tttgtgccca gcctgagtca
 gcaccaatcc cgcattcaga acctcccagt gaaagggcag ccttcatttt gagaaggtgg
                                                                      600
 aaggtgttag ggtttgggag acagctcatc caatctccca agtctcatgg tggatttgtg
                                                                      660
 actgtgagag tttccggttt aaaatctgaa aagccagata tgcctgtttc cttttcccag
                                                                      720
 caccatgcct gtggagggga cagtcagacc cagaggtcct ttacgtgtgg atggagttca
                                                                      780
 caggcgaata gaggagagga ccaggggacg tggcttgtcc cttttgtcca acaaagcatt
                                                                      840
```

| atattttaa gaatggcaga cctgtttgct gaagtgttca taagataaca ataggcttga atctccaatt caaatgaatg tcaaagcaca tatctttaat atgctgaatg aatatttatt tttgtatcca ttaaaacagt atattgatct cttttattct ttattaaaat aaaatgctct tttttaaaaa aaaaaaaaaa | 900 960 1020 1055 |
|---|--|
| <211> 1161 | |
| <212> DNA | |
| <213> Homo sapiens | |
| <400> 1274 | |
| ggagggtcc ggccttagca gctgcaccgc catccccatg ctggttggtg ctgccctgcc | 60 |
| tatagtacaa aatattactt cagcccagag ccagagggct gggtcccggg tcctccacag | 120 180 |
| gtgacccgg tggacacacg cgttcccatc ctggcctccg tctctgcttt tccacttcta | 240 |
| cctgcgtgtg ggtttgccgc cttgtcatcg gttgtgtgag tgtcgcagac ctttccagag | 300 |
| ctccggttca ctctttccaa acaggcctcc ctgtcggtgg cactgcactc ctagaacctt | 360 |
| cagtttctac gatggtttgt ttggtccttt tgaaccaccc caaagaactc aacatggcaa | 420 |
| agcaaatggt aaaagcttcc cgactgttct actttgggtc cgcgcgaagc ccactcacgt | 480 |
| gtgatctgtg ttgcccctct cggtggtccc aggcgatcca gccatgcccc ctgccctct | 540 |
| gccagatgct tcaggggccc ggcttttcag gcttgccctc accagcggcc gtcagccgac actcaggatg tagctaacac cactccgcca gtgctttcag taggaagagc tgaggctgcc | 600 |
| actcaggatg tagctaacac cactcaggaa gtgcttttag taggaaggag astctgcac tggaaggccc ggggcgaccg gaaaagggct ctctcaagtt ctgaaaagag aatctgccac | 660 |
| cagategaat ttegaceet gagettgtte ggacgtatgg tecaaaattea gattaaggtg | 720 |
| gtcaccaac ccgagatgtc aggaaaggcc ttctgcagag aaaatgtccc cccacccgcc | 780 |
| atotgoago aggtgtgtg cacacggcag cottcocgaa acatagtatg gattttaaaa | 840 |
| atotottat tittottot caaccacttt ataacgtatt titlaatta tittgtaacg | 900 |
| habbatter against act actatactic teatactica cactgilli alcaligati | 960 |
| tattttataa aagttgtaca ctaatgttct atgtcaaaat caaaagtati taatgaaata | 1020 |
| atomttatat ttaatotoot tatogaacca gctggaaaca caadacdaac aytgattyta | 1080 |
| cagcaggetg ggcccaggag gtcaggttca ttttgttaca tatgcaataa actcacgact | 1140 |
| ttaaaaaaa aaaaaaaaa a | 1161 |
| | |
| <210> 1275 | |
| | |
| <211> 1681 | |
| <212> DNA | |
| | |
| <212> DNA <213> Homo sapiens | |
| <212> DNA <213> Homo sapiens <400> 1275 astronoggg toggecogg cgtccgctca acttctacca gttcctcggg gtgcagcagg | 60 |
| <212> DNA <213> Homo sapiens <400> 1275 aattcccggg tcgacccacg cgtccgctca acttctacca gttcctcggg gtgcagcagg | 120 |
| <212> DNA <213> Homo sapiens <400> 1275 aattcccggg tcgacccacg cgtccgctca acttctacca gttcctcggg gtgcagcagg atgcatcatc tgcagacatc agaaaagcat atcgtaagct ttcactaact ttacatccag | 120 180 |
| <212> DNA <213> Homo sapiens <400> 1275 aattcccggg tcgacccacg cgtccgctca acttctacca gttcctcggg gtgcagcagg atgcatcatc tgcagacatc agaaaagcat atcgtaagct ttcactaact ttacatccag acaagaataa agatgaaaat gcagaaactc agtttagaca attggtggcc atttatgaag ttttaaagga tgatgaacga aggcagaggt atgatgatat tctgatcaat ggacttccag | 120 180 240 |
| <212> DNA <213> Homo sapiens <400> 1275 aattcccggg tcgacccacg cgtccgctca acttctacca gttcctcggg gtgcagcagg atgcatcatc tgcagacatc agaaaagcat atcgtaagct ttcactaact ttacatccag acaagaataa agatgaaaat gcagaaactc agtttagaca attggtggcc atttatgaag ttttaaagga tgatgaacga aggcagaggt atgatgatat tctgatcaat ggacttccag attggggaca gcctgtattc tactacaggc gggtgagaaa aatgagcaat gctgagctgg | 120 180 240 300 |
| <212> DNA <213> Homo sapiens <400> 1275 aattcccggg tcgacccacg cgtccgctca acttctacca gttcctcggg gtgcagcagg atgcatcatc tgcagacatc agaaaagcat atcgtaagct ttcactaact ttacatccag acaagaataa agatgaaaat gcagaaactc agtttagaca attggtggcc atttatgaag ttttaaagga tgatgaacga aggcagaggt atgatgatat tctgatcaat ggacttccag attggcgaca gcctgtattc tactacaggc gggtgagaaa aatgagcaat gctgagctgg cattactctt gttcattatt ctcacagtgg gtcattatgc tgtggtttgg tcaatctacc | 120 180 240 300 360 |
| <212> DNA <213> Homo sapiens <400> 1275 aattcccggg tcgacccacg cgtccgctca acttctacca gttcctcggg gtgcagcagg atgcatcatc tgcagacatc agaaaagcat atcgtaagct ttcactaact ttacatccag acaagaataa agatgaaaat gcagaaactc agtttagaca attggtggcc atttatgaag ttttaaagga tgatgaacga aggcagaggt atgatgatat tctgatcaat ggacttccag attggcgaca gcctgtattc tactacaggc gggtgagaaa aatgagcaat gctgagctgg cattactctt gttcattatt ctcacagtgg gtcattatgc tgtggtttgg tcaatctacc tgggaaaac aactggatga actactaagt ttgaaaaaag agagaaaaga aaaaaaagac | 120 180 240 300 360 420 |
| <pre><212> DNA <213> Homo sapiens <400> 1275 aattcccggg tcgacccacg cgtccgctca acttctacca gttcctcggg gtgcagcagg atgcatcatc tgcagacatc agaaaagcat atcgtaagct ttcactaact ttacatccag acaagaataa agatgaaaat gcagaaactc agtttagaca attggtggcc atttatagag ttttaaagga tgatgaacga aggcagaggt atgatgatat tctgatcaat ggacttccag attggcgaca gcctgtattc tactacaggc gggtgagaaa aatgagcaat gctgagctgg cattactctt gttcattatt ctcacagtgg gtcattatgc tgtggtttgg tcaatctacc tgggaaaaac aactggatga actactaagt ttgaaaaaag agagaaaaga aaaaaaagac tggaggaag agtgtggatg tatcaaaact cggtgcttca gaaaaaaatg aaagattgct</pre> | 120 180 240 300 360 420 480 |
| <pre><212> DNA <213> Homo sapiens <400> 1275 aattcccggg tcgacccacg cgtccgctca acttctacca gttcctcggg gtgcagcagg atgcatcatc tgcagacatc agaaaagcat atcgtaagct ttcactaact ttacatccag acaagaataa agatgaaaat gcagaaactc agtttagaca attggtggcc atttataaaga tgatgaacga aggcagaggt atgatgatat tctgatcaat ggacttccag attggcgaca gcctgtattc tactacaggc gggtgagaaa aatgagcaat gctgagctgg cattactctt gttcattatt ctcacagtgg gtcattatgc tgtggtttgg tcaatctacc tgggaaaaac aactggatga actactaagt ttgaaaaaag agagaaaaga aaaaaaagac tggcagcaag agtgtggatg tatcaaaact cggtgcttca gaaaaaaatg aaagattgct gatgaaacca cagtggcatg atttgcttcc atgcaaactg gggatttggt tttgccttac</pre> | 120 180 240 300 360 420 480 540 |
| <pre><212> DNA <213> Homo sapiens <400> 1275 aattcccggg tcgacccacg cgtccgctca acttctacca gttcctcggg gtgcagcagg atgcatcatc tgcagacatc agaaaagcat atcgtaagct ttcactaact ttacatccag acaagaataa agatgaaaat gcagaaactc agtttagaca attggtggcc atttataaagga tgatgaacga aggcagaggt atgatgatat tctgatcaat ggacttccag attggcgaca gcctgtattc tactacaggc gggtgagaaa aatgagcaat gctgagctgg cattactctt gttcattatt ctcacagtgg gtcattatgc tgtggtttgg tcaatctacc tgggaaaacc aactggatga actactaagt ttgaaaaaag agagaaaaga agagaaaaga tggcagcaag agtgtggatg tatcaaaact cggtgcttca gaaaaaaatg aaagattgct gatgaaacca cagtggcatg atttgcttcc atgcaaactg gggatttggt tttgccttac actaaaagca ttacctcacc tcatccagga tgctgggcag ttttatgcta aataaaaga</pre> | 120 180 240 300 360 420 480 540 600 |
| <pre><212> DNA <213> Homo sapiens <400> 1275 aattcccggg tcgacccacg cgtccgctca acttctacca gttcctcggg gtgcagcagg atgcatcatc tgcagacatc agaaaagcat atcgtaagct ttcactaact ttacatccag acaagaataa agatgaaaat gcagaaactc agtttagaca attggtggcc atttataaaga tgatgaacga aggcagaggt atgatgatat tctgatcaat ggacttccag attggcgaca gcctgtattc tactacaggc gggtgagaaa aatgagcaat gctgagctgg cattactctt gttcattatt ctcacagtgg gtcattatgc tgtggtttgg tcaatctacc tgggaaaaac aactggatga actactaagt ttgaaaaaag agagaaaaga agggagaacc agtgcagcaag agtgtggatg tatcaaaact cggtgcttca gaaaaaaatg gagttgct gatgaacca cagtggcatg atttgcttcc atgcaaactg gggatttggt tttgccttac actaaaagca ttacctcacc tcatccagga tgctggcag ttttatgcta aataaaaga aacaagattg aaggaaaagg aagatgcact gactagaact gaacttgaaa cacttcaaaa</pre> | 120 180 240 300 360 420 480 540 600 660 |
| <pre><212> DNA <213> Homo sapiens <400> 1275 aattcccggg tcgacccacg cgtccgctca acttctacca gttcctcggg gtgcagcagg atgcatcatc tgcagacatc agaaaagcat atcgtaagct ttcactaact ttacatccag acaagaataa agatgaaaat gcagaaactc agtttagaca attggtggcc atttaaagga tgatgaacga aggcagaggt atgatgatat tctgatcaat ggacttccag attggcgaca gcctgtattc tactacaggc gggtgagaaa aatgagcaat gctgagctgg cattactctt gttcattatt ctcacagtgg gtcattatgc tgtggtttgg tcaatctacc tgggaaaaac aactggatga actactaagt ttgaaaaaag agagaaaaga aggagaaaga agtggagat atttgcttcc atgcaaactg gggatttggt tttgccttac actaaaagca tacctcacc tcatccagga tgctgggcag ttttatgcta aataaaaga aacaagattg aaggaaaagg aagatgcact gactagaact gaacttgaaa cacttcaaaa acaagattg aaggaaaagg aagatgcact gactagaact gaacttgaaa cacttcaaaa acaagattg aaggaaaagg aagatgcact gactagaact taccacctt tagaaactac</pre> | 120 180 240 300 360 420 480 540 600 |
| <pre><212> DNA <213> Homo sapiens <400> 1275 aattcccggg tcgacccacg cgtccgctca acttctacca gttcctcggg gtgcagcagg atgcatcatc tgcagacatc agaaaagcat atcgtaagct ttcactaact ttacatccag acaagaataa agatgaaaat gcagaaactc agtttagaca attggtggcc atttaaagga tgatgaacga aggcagaggt atgatgatat tctgatcaat ggacttccag attggcgaca gcctgtattc tactacaggc gggtgagaaa aatgagcaat gctgagctgg cattactctt gtcattatt ctcacagtgg gtcattatgc tgggataaacc aactggatga actactaagt ttgaaaaaag aggaaaaga aggtggatga tatcaaaact ggggtttca gagaaaaaga aaaaaaagac tggcagaaac cagtggcatg atttgcttcc atgcaaactg gggatttggt tttgccttac actaaaagca tacctcacc tcatccagga tgctgggcag ttttatgcta aaaaaaaagac aacaagattg aaggaaaagg aagatgcact gactagaact gaacttgaaa cacttcaaaa acaagaagaaa gttaaaaaac caaaacctga atttcctgta tacacacctt tagaaactac atgaagaaa attgaggaac aattgagaac aattgaggaac aaatggatga</pre> | 120 180 240 300 360 420 480 540 600 660 720 |
| <pre><212> DNA <213> Homo sapiens <400> 1275 aattcccggg tcgaccacg cgtccgctca acttctacca gttcctcggg gtgcagcagg atgcatcatc tgcagacatc agaaaagcat atcgtaagct ttcactaact ttacatccag acaagaataa agatgaaaat gcagaaactc agtttagaca attggtggcc atttatgaag ttttaaagga tgatgaacga aggcagaggt atgatgatat tctgatcaat ggacttccag attggcgaca gcctgtattc tactacaggc gggtgagaaa aatgagcaat gctgagctgg tcattactctt gttcattatt ctcacagtgg gtcattatgc tgtggtttgg tcaatctacc tgggaaaaac aactggatga actactaagt ttgaaaaaaga agagaaaaga actactaagt ttgaaaaaaag gagaaaaga actactaagt tgaaaacac ggggtgctca gaaaaaaatg gggattggt gatgaaacca cagtggcatg atttgctcc atgcaaactg gggatttggt tttgccttac actaaaagca ttacctcacc tcatccagga tgctggcag ttttatgct agaaaaaaaga gaaaaaaagac tactacaaga tgctggcag tcatcagaa ggaacttggt tttgccttac actaaaagca ttacctcacc tcatccagga tgctggcag ttttatgcta aatataaaga acaagaagaa gttaaaaaac caaaacctga atttcctgta tacacacctt tagaaactac atatatcag tcttatgatc atggaactc catagaagaa aaacaggca cctgaatgga cagaagagga</pre> | 120 180 240 300 360 420 480 540 600 660 720 780 |
| <pre><212> DNA <213> Homo sapiens <400> 1275 aatteeeggg tegaeceaeg egteegetea acttetacea gtteeteggg gtgeageagg atgeateate tgeagacate agaaaageat ategtaaget teeteaeg agaaaagea attgetagee attaeteagg gedgaaaete egteageagg atgeagaggt atgatgaaa aggeagaggt atgatgatat teetgateaat ggaetteeag gedgaaaee aattgegggaaa aatgageaa aatgageaaa aatgageaag getgagetgg teataatee tgggaaaaae aactggatga actaeaaage gedgaaaee acaaagattg aggaaaagg attgeteeagaaaee aacaagattg aaggaaaaga aggaaaaga aggaaaaga aggaaaaga aggaaaaga aagaateea ataatateag tettatgate tetatgate aacaagaagaa gtaaaaaee aacaagaagaa gtaaaaaee gaacaagaagaa gtaagaacee gaacaagaa gtaagaagaa gtaagaagaa gtaagaagaa gtaagaagaa gtaagaagaa gtaagaagaa gtaagaagaa gaacacagaa gaacacagaa gtaagagaa gtaagagaa gtaagagaa gtaagagaa gtatggataa ggagaacteeag gggaacteeag gggaacteeag</pre> | 120 180 240 300 360 420 480 540 600 660 720 780 840 |
| <pre><212> DNA <213> Homo sapiens <400> 1275 aattcccggg tcgacccacg agaaaagcat accagaagaataa agatgaaaat gcagaaactc acaagaataa agatgaaaat agatgaaact aggacaggg tttaaaagga aggagaggt attggtggac attatatcat tactacagg gggtgagaaa aatggacaat aatggtggac attatatctt gttcattatt ctcacagg gggtgagaaaaa agatgaaaac aactggatga actactaagt tacaaaaagaa aggagaaagg gtgggatg attatatat cggtgcaca actacaagt taccaaaagaaagaa agagaaaaaga agagaaaaga agagaaaaga agagaaaaga agagaaaaga agagaaaaga agagaaaaga agagaaaaga agagaaaaga agagaaaaga aagatgacat tacctcaca tcaccagga gggatttggt tttatgcta aatatataaga agagaaaaga agaatgaact gactagaact gactagaact gactagaact gacaactga atttcctgta tacacacct tagaaacta aatatatcag tctatgatc atggaactc catagaagaa aaaacaggaa ccaaaacagaa gacacagaa aaaacaggaa ccaaaacagaa gactagaact aatggaacta aatggaacta aatggaacta aacagaagaa gacacagaa aaaacaggaa cctgaaagaa gacacagaa gacacagaa gacacagaa ggacaccaaga aaaacaggaa ccaaaaccaaag gcaaccaaaac caaaaccaaag gacaccaaaa aacacaaag gacaccaaaa aacacaaagaa aaaacaagaa caaaacaagaa aaaacaagaa aaaacaaaacaaaacaaaaacaaaacaaaacaaaacaaaa</pre> | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 |
| <pre><212> DNA <213> Homo sapiens <400> 1275 aattcccggg tcgaccacg cgtccgctca acttctacca gttcctcggg gtgcagcagg tcgaccacg agaaaagcat acaagaata agatgaaaat gcagaaactc agataagaat atcgtaagct tttaaagga tgatgaacga aggcagaggt attgagcaa aggcagaggt attgagcaa aggcagaggt attgagcaa aggcagaggt atggagaaa actggagag gcctgtattc tccacagtgg gtcattatgc tgtggaaaaac aactggatga actactaagt tgggaaaaac aactggatga actactaagt tgggaaaaaca agtgggatg actacaaga tggcagaagag actacaaaga tggcagaagag actacaaaact agaaaaaac aactggatga actactaagt tggaaaaaac aactggatga actactaagt tggaaaaaaa aggaaaaaga agagaaaaga agagaaaaga agagaaaaga agagaaaaga agagaaaaga agagaaaaga aagatgcact aacaaaactg agacatagaact aacaccacta attacaagac tcaacaagaac aaaaacctga atttcctgaaa aaaaacacca attacaagaa gttaaaaaac caaaacctga atttcctgaaa aaaaacacca aaaaccagaa gtcgacagaacca aaaacaggaa gtaggataa aaaacaggaa gtaggataa aaaacaggaa gtaggataa aaaacaggaa gtaggataa aaaacaggaa gtaggataa aaaacaggaa gtaggataa aaaacaggaa gtagaacta gaacacaaaa gtaggataa aaaacacaaaa gtaggataa aaaacacaaaa gtaggataa aaaacacacaaaa gtaggataa aaaacacaaaa gtaggataa aaaacacaaaa gtaggataa aaaacacaaaa gtaggataa aaaacacaaaa gtaggataa aaaacacaaaa gtaggataa aaaacacaaaa gtagaacaca aaaacacaaaa gtaggataa aaaacacaaaa gtaggataa aaaacacaaaa gtagaacaca aaaacacaaaa gtagaacaca aaaacacaaaa gtaggaacta gaacacaaaaa caaaacacaaaa gtagaacaca aaaacacaaaa gtagaacaca aaaacacacaaaa gtagaacacaaaaaaaaaa</pre> | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1080 |
| <pre><212> DNA <213> Homo sapiens <400> 1275 aattcccggg tcgaccacg cgtccgctca acttctacca gttcctcggg gtgcagcagg ttgcaccacg agaaaagcat atcgtaagct ttcactaact ttacatccag acaagaataa agatgaaaat gcagaaactc aggttagaca attggtggcc attgaccag gctgtattc tactacaggc ggtgagaaa aatgggcaaa actgggaaaaac gcagaaactc ggttcattatt ctcacaggg gtgcagagag attgggagaaaac gattgagaaaac aactggatga actactaagt ttgaaaaaag gttgaaacca aactggatga actactaagt ttgaaaaaag gagagaaaaga aacaagaaca aacaagatg aacacagaa aacaagaca tacctcacc tcatccacc tcatccag aggacttccag gggtggaaaaacc gagagaaaaga aagattgct taccacagaa aggaaaaaca gacaaaactga aacaagaaca aacaagaaa gttaaaaaac caaaacctga atttcctgta tacacacctt atatatcag tcttatgatc atggaacttc catagaagaa aacaagaca cctcagcaa aacaggaacc gaacacagaa aaaaacagca ggaactcaga gggactccag gggactccag gggactccag gggactccag gggactccag gggacccag gtcgaacgact gacaagaacta cacaaacctga aacaagaca cctgaaagaac aacaggaacc cacaagaa gtaggttaa ggcgactct ggaagactc aacacacac ttagaaaactac aaaacaggaa cctgaaagaac gacacagaa gtaggttaa ggcgactcag gggacccaca ggagactcaa ggaacccacagaa gtaggacccaca aacacgaca cctgaacaga gtagaccaca aacacggca ccacaagaa gtagaccaca aacacgaca cccaagaacta ggaacccaca ggaacccacaaaa ggaaccacaaaa ggaaccacaaaa ggaacccacaaaaccacaccacacaca</pre> | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1080 1140 |
| <pre><212> DNA <213> Homo sapiens <400> 1275 aattcccggg tcgaccacg cgtccgctca acttctacca gttcctcggg gtgcagcagg atgcatcatc agaaaaact agaaaaact agaaaaact agaagaaact agatgaaaat gcagaaact aggttaagac aggttagaca aggtgaggag attgatgatat tctgatcaat ggacttccag gtcattactt tggagaaaac actgagagg attgatgaaaac aggtgagagg attgatgaaa actggaggagg attgatgaaaaca aggtgagagg attgatgatat tggagaaaaca aggtgagaag attgatgatat tctgatcaat ggacttccag gggtgagaaa aatggagaaa aatggagaaa aatgagcaat ggacttccag ggtgagaaaaca tggagaaaaca aactggatga attacaaact cggtgcttca ggaaaaaaaga aaaaaaagac ggaaaaaaaa gagaaaaaga aaaaaaagac aacaagaat atacctaac tcaccagga gtcattatgc tgtggtttgg tcaatctacc aggaaaaaaca aactggatga attggttca attgaaaaaca ggaaaaaaaaa gaaaaaaagac gaaaaaaaa</pre> | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1080 1140 1200 |
| <212> DNA <213> Homo sapiens <400> 1275 aattcccggg tagcaccacg cgaaaagcat acaagaataa agatgaaaat gatgaaact cattactctt gttcatattc tggagacatc actactctt gttcattatt cattacagg attggaaaaca actggatgaa actggaaaaca acaagaatga acaagaaaaa gtaaaaaaac acaagaatga acaaaacagaa acaagaaaaa gtaaaaaaac acaagaaca accacaagaa acaagaaca acaagaacaca acaagaacaca accacaagaa acaagaacaca acaagaacaca accacaagaa acaagaacaca accacaagaa acaagaacacaaa acaagaacacaaaa acaagaacacaaaa acaagaacacaaaa acaagaacacaaaa acaagaacacaaaa acaagaacac accacaagaa acaacaagaa acaacaaaa acaagaacac accacaagaa acaacaagaa acaacaagaa acaacaagaa acaacaagaa acaacaagaa acaacaagaa acaacaagaa acaacaagaa acaacaagaa acaacaaaaa acaagaacaca acacaaaaacacaaaa accaacaaaa acaagaacacaaaaacacaaaaacacaaaacacaaaacacaaaacac | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1080 1140 1200 1260 |
| <212> DNA <213> Homo sapiens <400> 1275 aattcccggg tcgaccacg atgacactc acaagaataa agatgaaaat tttaaagga atgaggaaat tttaaagga atgggggaa actgatct tggagacac aggagaactc atgaggaaa atgaggaaat tctgagaaac aggaggagga atgatgaaa atggggagaa atgatgaaa atgggggaga atgatgaaa atgaggaaaat tctgagaaacc aggaggaga atgatgaaa atgaggaaa atgatgaaa atggggggaga aatgatgaa atggggggagaa aatgaggaaa atgatgaaa atgggggaga atgatgaa atgatgaaa atgaggaaa aggaggaaaac aggaggaaaacc aggaggaaaacc aggaggaaaacc aggaggaaaacc agtgggaagaa aacaagaaga aacaagaaga aacaagaaga aacaagaaca aacaagattg aacaagaaaga aagaagaacc aacaaaaccga agaggaaaccg aacaagaa aaagattgcc agaggaacca aacagaacag | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1080 1140 1200 1260 1320 |
| <pre><212> DNA <213> Homo sapiens <400> 1275 aattcccggg tcgaccacg cgtccgctca acttctacca gttcctcggg gtgcagcagg atgcatcatc agaaaaact agaaaaact agaaaaact agaagaact agatgaaact agatgaaact aggcagaggt attgatgaca agtttagaca agtttagaca aggcagaggt attggcgaca gcctgtattc tgggaaaaac aactggatga actactaagt tggagaaaacc agttgcagcag gtcattattc tgggaaaaac agtgtggatg actactaagt tggaaaaaag agtgtggatg actactaagt tggaaaaaag aggagagaga attggtgctca aactggagagagagagaaaaaga agagaaaaaga agagaaaaga aaaaaa</pre> | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1080 1140 1200 1260 |

| ggggatcctc tgaccgctgg gacaaaatag ccagatgtgt cccgtccaag agcaaggaag actgtatcgc taggtacaag ttgctggttg aactggtcca aaagaaaaaa caagctaaaa gctgaatatt ctgggagatg atgttcacct tcattttcca aaatgaatat cttaaaaaatc ttatgcagaa atttgcattt tgtacctcaa tatttctacg tcatgtgcct tagtaaaaaa aaataataaa taaataaaag ataaaaaaaa | 1440 1500 1560 1620 1680 1681 |
|---|---|
| <210> 1276 <211> 678 <212> DNA <213> Homo sapiens | |
| <pre><400> 1276 cacgcgtccg gattttcac taattggttt gtttgaatta tctagatact ctttcataat aattctatat tgcttatgac ttgagtcttt gaacaagaat ggtaagtggc ctcataaaac atagcaattg gctgtgttc accttagcac tagtacatgc caaatgcagc atctctttt ctttgttaca ttgtagcttt gccatgctgt tatgcagtgg cttggatgta atcttttagt catagtggag tggtttggat taatttgttg cattttacta atggacacaa aagcatagta tcctgttaat taactggtca caaacttata aagggacttc ctttagagtt aaagatttag agttaaaggt taaaggttta ggttgggtgc cctggctcat gcctacagtc ccagcacttt gggaggccaa ggcaggcaga tcacttgagg ccatgagttc gagaccagcc tggccaacat ggtgaaatcc cgtctttaca aaaaatacaa aaaattactg gtgtggtggt gggtgcttgt atcccagcta cttgggaagc cactccaacc cgatgacaga acaagaccta tctcaaaaaa aaaaaaaaaa aaaaaaaaa</pre> | 60 120 180 240 300 360 420 480 540 600 660 678 |
| <210> 1277 <211> 610 <212> DNA <213> Homo sapiens | |
| <pre><400> 1277 aattcccggg tcgacccacg cctccgaaaa aaagaaaaga</pre> | 60 120 180 240 300 360 420 480 540 600 610 |
| <210> 1278 <211> 1264 <212> DNA <213> Homo sapiens | |
| cggcacgagt ctttttttg gcctgtctta cctacagttg tattttcctc tttaatcata aggatttaca tcaggaaaaa taacctgaga atagatgtgt tttgtttgaa tgtcgtagtt gtgccctttg taaaattacc ccagggcatg ataagaaaag gagtaagcaa ttaaaatgca cagggctacg gcaagggcag gcagatctga gtggaggctg ctgtcctgtg aagtagacct ggcaggggat ggctgctcg ggctggcctg ggcctcgctc tgcctctgtt gttgctctga ctataaaggtc actaaaggtca cttgtagcct tcggttgccc catctgagcg agaggctga ctgtcttgaaattttaga cactacatg tttgccatga tcattgccaa tcaaactagg agattttaga cactcagact ggaaaataca gacgaggcca tagaagttag tgttgtccta gggatggctc ctggttcacg caggctcctc atagggtcc tgccgctc tgcctgtcc caccacgagc caccacgagc tgctgcagc tcgctcatca atagggtcc caccacgagc caccatggcc aggaggccct agaacagag caccatggcc aggaggccct | 60 120 180 240 300 360 420 480 540 600 660 |

```
tcctttgttg ggtaggagct gccccgtcc atgttccagc tcctcccagg cccccatgga
                                                                      720
taaaataggg ccacaggtga caagtgagtt ctgtgaccct gaccggcagc agctgccagc
                                                                      780
                                                                      840
gaaggaggaa ggaaacacag acaggaggtc tcagagcaca gcacgccaga cctctagtcc
                                                                      900
acacagtect geacacattg cegtetttgt ttaaagagag geggaggeag acceeaggea
                                                                      960
ttcaaatgat agaatgcttc tgctgtgcct gcatccttcc ctcctccact aggagcctct
ggttccagcc cagatgaacc cactgggctg ggaacgccac acaaaagcac tctccaagcc
                                                                     1020
agccagaggt ccctgagggc caagacaggg ctgaccagag gcagtgtctg gacatcctac
                                                                     1080
tgggagctcg ggaggaggca gtgacagctc aggccagtaa tgggtattct tgagagcaat
                                                                     1140
cccaggtcat caagggaaga aaaggttatg cttcgtatac tgtgttcagg ggccagataa
                                                                     1200
gttttaatac gttccagaag tgtgctcaag caaaaaaaaa aaaaaaaaac tcgagggggg
                                                                     1260
                                                                     1264
gccc
<210> 1279
<211> 942
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (437)
<223> n equals a,t,g, or c
<400> 1279
                                                                       60
ctgcaggaat tcgscacgag ccagctcgaa aaaatccatg cttttgagac cgagaatctg
                                                                      120
ggaggagttt tgagtcatgg gcgtgaatgc aaaaggagag taagagaatg ggacgagacg
                                                                      180
gggcagagcc gagaatatta caaagaaggg ctaagctatg ggcttccttt ctgtctggtt
cttqcttqca tcttqccatg ctatcatttq ctacttttct tqcctcqgtq gtttqtaaaa
                                                                      240
                                                                      300
aataagagcc ccgggtgcat gtgtcccctc attcactctg tgtgggcaaa ggaaaatgaa
gcccttatgg tcacctggtg tttctaactt taaaacagcc tcatatctct tatttaattc
                                                                      360
acacagaaat cctgtgtgca gagccaagga tattcccatt ttatagacaa ggaaatggag
                                                                      420
aaaaaggttg agaaaankga tcttccagtc acatttacct mttcctgcct cccacaagtg
                                                                      480
cttcctgggt cctatcccag ggtttttttg tactttactg attttaacaa atacagcctt
                                                                      540
                                                                      600
tgatcactct cagctacctg ccacactggt gccatcacta ggtgagttat aaagactcat
catcatgata ctctccatga ttgggagcat tctatgtgcc aggaattttt ctgggggctt
                                                                      660
ttcacatcgt atttccttct gatccccaca actctccttt gagatacaca gtgttatgat
                                                                      720
                                                                      780
gcccattgta cagatgaggt gaggtgcttt aggccacaca gccccagcca acacatgcag
acatcacata gctaggaaat gcgaatccag catctgaatg tgttagcaca gagggtcccc
                                                                      840
tccctggata aaccttctgg aactcccggt catgtaagac aatgtccaaa ttcctcagtg
                                                                      900
                                                                      942
tggtgtgcat gcaccctgc agccactgcc ctgcccctcg ag
<210> 1280
<211> 1522
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (357)
<223> n equals a,t,g, or c
<400> 1280
nccccgggct gcaggaattc ggcacgagag agagaacgca tgcaaactcc atctcaaaaa
                                                                       60
                                                                      120
aaatgtattg tttatctgca attctgattt aattgggcat cctggatttt ccctggcaat
tgtattcctg gagcaacaag aggactctca acaccaaaca ggccatcccg ttcctccatc
                                                                      180
aggtccctac agcatttgaa gtaaaatcca aaagtcctgg cttcgcctgc aaggccctgc
                                                                      240
```

atggctgaaa ggaaacagca gccagcccca cagactttga ggagttccca gggtggatca

300

```
ggcaggcaag tggattttgt ggtcctggtc cctcacggtt gtctgttccc ccacatnctc
                                                                     360
ctagaacccc ttgttcgtgg aggctgagga gaaagtctcc tacaactgct gccgccargg
                                                                     420
cactgtctgt ttgcaaatcc agatggaaag gaacaccttc acgccaggag agaaggtcgt
                                                                     480
cttcacaaca gagrtcaacw wccakaccag caaatgcatc aagacggtcg tattcgccct
                                                                     540
gtatgcccac atacagtacg agggcttcac gcccagtgca gagcggcggt ctcggctgga
                                                                     600
cagcagcgag cttctgaggc aggaggccaa caccccgtg acccgcttca acaccaccaa
                                                                     660
ggttgtcagc accttcaacc tgccgttgct gctgtccgtg agcagcagca cgcaggacgg
                                                                     720
tgagatcatg cacactcgct acgagctggt caccaccgtg cacctgccyt ggtccctgac
                                                                     780
cagcytcaag gccaaagttc ccatcatcat caccagcgcc tcagtggact ctgccatctg
                                                                     840
ccagctgtca gaggacggag tgttacccgt gaacccagat caccagaatt aagtgcccga
                                                                     900
acttttaaat attaaaagct ttattagtct ctaccaggag gaagccctct ctcttgcaca
                                                                     960
ggtgactctc agaggagtcg aggagtgggc aacaggttgt ctgcaacctc cccaagctct
                                                                    1020
agcggtttag gtatctgtgt ctcccctccc tagaactatc actgaatgcc tggaatggac
                                                                    1080
aaaggaaacc gggaagktet eecaggaeee aaacceggea taacetgeet tttecaceet
                                                                    1140
gaktetgeee cageetaetg gggteteaea gtgeeaagae caggggteet aettggggag
                                                                    1200
aattctcccc tctgctaatg tctggtttat tggctgtcac aactgcaggg gatcggggga
                                                                    1260
gaagagtctt attggcgtgg agagggtgga ggccagggac gctgttcagc accctgcagt
                                                                    1320
gtccaggacg gcccccacaa tcaggaattg tttatcctga atgtcaacag taccaagggg
                                                                    1380
gctgagcatg gtggctcatt cctgtaatcc caggactttg ggaggccatg gctggaggat
                                                                    1440
cacttgagac caggagtttg agacaagcct gggcaacact gtgagacccc catctctaca
                                                                    1500
aaaaaaaaaa aaaaaaactc ga
                                                                    1522
<210> 1281
<211> 1446
<212> DNA
<213> Homo sapiens
<400> 1281
ggcacgaggt agctgccagc accattgttg ttaacttggc tctggtgtgg tcgcacaggt
                                                                      60
acageacetg gtgeacagga ggetetgaaa ecaeaggeee tteeceattg ecettteece
                                                                     120
cctgttctgg gcttgaccct tcctgtgagg gcctggacct cctgcttccg ctatctccca
                                                                     180
gtggctggct cagcatggct ctttctcatt tgctccttca ttctcgccca ctccttgagg
                                                                     240
tetgtetate teaegteetg etgteeeete atgaaegeee eettettete ttteeetgee
                                                                     300
teetttetgg tetetetggg getgteetea gagteettet tgggtagttt cagggetget
                                                                     360
gccaagtcca cccwgwgcgc ccctgcgctc tgccccaagc agtctggagc aggcactttt
                                                                     420
cccagaacac tggggtttgg aaaacagaac gtccctttag gcctctgtga cctgctcca
                                                                     480
acttttagat gagtttactc aacctttggc ttccgggtgc aggctctgcc tcctctgggg
                                                                     540
ccgtctcacc tgtgcaggga cagcagctga ttctgatact ggattccaar tgggctccct
                                                                     600
ggggcettee ttgtgggcae eetgagetet tteaaggeea tteeceaeet eaetteeaea
                                                                     660
agtgagctgg gctggctgca gggaaagggc gcatgtgtct cttgagagaa gctggcasgc
                                                                     720
ggccagcatt cctgcctctg gatggagagc cagaaggctg agctctgaaa ggcccaggag
                                                                     780
attgggcaat ggtgggtgga tctccccacc tgaatctgat gtgggtgcag caatgcctgg
                                                                     840
aatgacttgg tgactgctga ctgtgtttgt ccttgcctgg gtcatgcagg gcaccaccca
                                                                     900
tccaggatat gggtcagggg aggtctctga ctcacagtgc ttctgggcga attcaaaagc
                                                                     960
agaggctcct tgggtgtcag aagtggaaaa cgggagggag tgttttaaaa acccacctcc
                                                                    1020
catcctccag aagggaaacc aggacccaga agagcaaagt ctcatgcatc tcaactacct
                                                                    1080
gcttagcatc ttagaggcag cagtagtgtg tcgccattaa gaacacagag ggccgggcgc
                                                                    1140
agtagctcac gcctgtaatc ccagcacttt gggagaccga ggarggtgga tcatgaggtc
                                                                    1200
agaagatcga rgccatcctg gctaacacag tgaaaccccc ccatctctac taaaaatata
                                                                    1260
aaaaaattag ccaggtgtgg tggcacacgc ttgtaatccc agctactcgg gaggctgagg
                                                                    1320
caggagaatc acttgaaccc aggaggcgga ggttgcagtg agctgaggtg gcaccgctgc
                                                                    1380
1440
aaaaaa
                                                                    1446
<210> 1282
<211> 1193
<212> DNA
<213> Homo sapiens
<400> 1282
ggctgtcgcc cagcctggag tacaatggcg cgatcccagc tcactgcagc ctcccctgc
                                                                     60
```

```
ctgggttcaa acaattctcc tgcctcagcc tcccatggtg tgccgccaca cctggctatt
                                                                     120
ttttgtattt ttagtagaga cgcggtttca ccacgttgac caggctggtc tggaaatgca
                                                                     180
gtttttgcac tgtctgcctg cttaccttta tagagcatat tttgccctct tccatcagaa
                                                                     240
ttacccattt aatggtcagg aaaagctgct gggaatatga ctcatagctg ggacattctc
                                                                     300
tgcactgtgc atagttcctc tctgccacca ccatggagga gattgatggg tttgaaaccc
                                                                     360
aggggaagtc attgccctgc gagggtctcc ctcattgaga atctggatcc cctcatgtgc
                                                                     420
acatggtgag gtcagagtcc cctcctcaca gtgtcccctt ccacctcccg tgaactgttc
                                                                     480
tttccttcca ggaggccagc aagcgcatct ccagccacat ccctttgatc atccagttct
                                                                     540
tcatgetcca gacgtacgge cagcagette agaagggeea tgetgeaget cetgeaggae
                                                                     600
aaggacacct acagctggct cctgaaggag cggagcgaca ccagcgacaa gcggaagttc
                                                                     660
ctgaaggagc ggcttgcacg gctgacgcag gctcggcgcc ggcttgccca gttccccggt
                                                                     720
taaccacact ctgtccagcc ccgtagacgt gcacgcacac tgtctgcccc cgttcccggg
                                                                     780
tagccactgg actgacgact tgagtgctca gtagtcagac tggatagtcc gtctctgctt
                                                                     840
atccgttagc cgtggtgatt tagcaggaag ctgtgagagc agtttggttt ctagcatgaa
                                                                     900
gacagagccc caccctcaga tgcacatgag ctggcgggat tgaaggatgc tgtcttcgta
                                                                     960
ctgggaaagg gattttcagc cctcagaatc gctccacctt gcagctctcc ccttctctgt
                                                                    1020
attectagaa actgacacat getgaacate acagettatt teeteatttt tataatgtee
                                                                    1080
cttcacaaac ccagtgtttt aggagcatga gtgccgtgtg tgtgcgtcct gtcggagccc
                                                                    1140
1193
<210> 1283
<211> 921
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (773)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (813)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (851)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (885)
<223> n equals a,t,g, or c
<400> 1283
agatgctagt actttaaaag gaaataaggg aaaagccggt cttaactata tagatttttt
                                                                      60
tttaacataa atggctgcta tttggcactt tgctttttgc acttacctag atgtcctgga
                                                                     120
catctctcca cgtccactta tagacaactg cccaggtgtt ttcctggctg cagagatgat
                                                                     180
gtggactgaa ttcatttggc caatccccag gcaatggcca cttaggttat ttcccaagtt
                                                                     240
ttgacaccac aaacaaagct gcagcgagtg aatcagcttg tctgggctcg tgtgtctgtg
                                                                     300
aaaactatgt ggcaacactg aaacagattg cacacccaaa gcctgacttc tggctcctct
                                                                     360
tgggaatcag aagctctgcc tccctggccc acacgccata cttttagaag ccccactgcc
                                                                     420
ccagagccct atttgtccat gaattcctga ctcattgtct ggagcctgct tgagggaggc
                                                                     480
tgggcagggt gtgagccacc aggattaaag gttgtttgta gcctctgcct ccaaatagtt
                                                                     540
acctgcaaaa ggggacaagt gaagccacaa agattctact ttaaaaaaaar aaaaaraara
                                                                     600
ctcattaaag ttcccttagg tgtctccaga gagagcccag aggggcccag gagaccagag
                                                                     660
ttctggtcct gtctgtcaaa gaattggtct gtcagagaat tgggccactc tctgaagggc
                                                                     720
cccatccttg gtttaatgca tccagccctg actgtttgac cttggtgagg ggnctcagtg
                                                                     780
acgtcatctg tgaaatgggt acagactcct tgngggagtc tgtaagctca gctgtggttg
                                                                     840
gcaatataga ngcataaaca aagttgaaaa gctcctggcc agtgnggtgg ctcacacctg
                                                                     900
```

```
921
taatcccagc actttgggag g
<210> 1284
<211> 1059
<212> DNA
<213> Homo sapiens
<400> 1284
ggcacgagca ccccaggtcc atgagggcgg ggacttttga ttggtttgct gttgcctgtc
                                                                      60
aagagettta tttacteegt geacaaatga etgaateagt eeageeetea gtgatteate
                                                                     120
tgttttccct cttccttttc ccatatcggg tgtgcgaacc tctgctcacc aagtaccagt
                                                                     180
cgggtccttc tcctgcccac gtgaaggaag aaggcgcagt ggggctgagg cctcactagg
                                                                     240
                                                                     300
gcacccacac ggagcgctgc gctcagcctt tggacccggt acctccccag gctctgagga
cagcagcagc cccaggacgg acgggtacgc caagtcctgg ggaccctctc ccaagctctg
                                                                     360
tcagggcggc ggggtggcgc gcgctcctcc ctcgggcgct agctctggaa atcgcgctag
                                                                     420
gcagaggtgg gcttgtgtcc gcacccgcag cctccgcgtc aacaccctag gggagaggga
                                                                     480
                                                                     540
cgcgggcagg ggtgccgggc ccaggctccc cagccattct caggccagaa cccccttttt
                                                                     600
aacaagacat ggccttggtg tgtcgcggac tctgccgggg acagtctggc agaactgggc
                                                                     660
tccttgcgct ccccagtata ccggctaatt ccgtgccctt tgcaaacttc atattttgat
                                                                     720
ttcaaattta aaaataatca ataggccggg tgcggtagct agctcctgta atctcagcct
cccaaagtgt tggcattaca ggtgtgtgct atcacgctgg ccttattttt attttttgaa
                                                                     780
                                                                     840
atggagtett getetgttge ecaggeagga gegtagtgge tegateatgg eteactgtag
cctccgcctc accctcccga atagctggga ctataggtgc gtgccacggt gcctggcccg
                                                                     900
                                                                     960
aatggctttg ttatacccac gtgaacagta ctacgtttta ctaacagaaa agcatcaaat
gagacttttc ttccgaaact atgttcagag agtgactgca gtattgcctt ggcaatctag
                                                                    1020
tgaatgtatc ctcaccgcat taaaaaaaaa aaaaaaaaa
                                                                    1059
<210> 1285
<211> 590
<212> DNA
<213> Homo sapiens
<400> 1285
ggcacgaggg tggatgcctg tagtcccagc tactagggag gccaaggcag gagaatcgct
                                                                      60
tgaatctggg aggtggaggt tgcagtgagc cgagatcaca ccactgcacc ccagcctggg
                                                                     120
caacgagtga aacttcctct caaaaaaaaa acactgcact gagaggcaga agacctaatc
                                                                     180
tcctgaacct ctgtgtatct cagtgtcatc atggacatga tgagactgga taagcctcag
                                                                     240
agcctctggg gaaggctgtt tgcaaacatg accacagttt ctcccatccc tataagttgc
                                                                     300
ctctttgcag cttgacattg ctgcttctct tgtcaagaag tggagatttt tttcccctct
                                                                     360
ccttgaatct gggctagctc tgtaacttgc tttgaccaat agacagaagt gacctgatgt
                                                                     420
gacttttgag tctaagcctt aattgcctcc actgtcaccg tcttggagcg atagtgtagc
                                                                     480
cctgtgaaga agcctgggct ggcttccttg aggataaaag accaggtgcc acagaaaggc
                                                                     540
                                                                     590
<210> 1286
<211> 965
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (193)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (643)
<223> n equals a,t,g, or c
<400> 1286
gcagctctag aaatctttcc ttctggtgct ctgatttgcc tgcctctggg aggaagggaa
                                                                     60
```

| gctgcagaga gcacatgctt tccagaaaac catctgtgct caggatatgg ccctctctc tcagtaggct cagttcatct tccttcttgg gcaggcaatt cccagtccat gaaggaggat ctcattgcag | agagaggcta gtnggtgtgg acttgagaat cttgtcttgt ctaacatgaa gtaactgcgg gatggagctg cacctactgt tgtagggctt ctagtattcc cggcccttag tgttgaatt cctccaactc | aggtttgtcc tttttgttgt ttgatgtrtc acgtttgtcc gttccactcc cttggagaga ttgcagtgaa cccttgccct ccaaatctcc aacgtgagcc atgtcaagaa tatatgcaga caggagattg ttgggctcaa tgccaccaca | gggagctgaa ttgcctgctg caagaggtta cttctggcca cttttctcct ctcagtccaw caccagcctg ttttatcagc ttgcatgcac ggctggcaag gggtagctcc aggctgcagc gtgatcctcc | ttgttggtct tggccatctc aacctgagat ttggaagggc agagctgtgc tayctgggct gtggggtttg ccagtccagg ctngatccat aaggctggtg aagtgggcc gagcagtggt tatctcaacc | ctctccagga taccactgct caggatcagg agtagcagaa ttgaaagggg ttcttgtcct cacagtgctg aacagtggtg atccagcatt ggcaggtgc actgtgatat gcagtcatag tcttgctgag | 120 180 240 300 360 420 480 540 660 720 780 840 900 965 |
|--|---|--|---|--|--|--|
| <212> DNA <213> Homo | sapiens | | | | | |
| caaacacatg ggacaggctg ctaagaccgg actcccctga tgtgctaagt tttccctgga aggaagagtt agggtgcagg tccagaggcc ggttgtggcc acagccatat ccagtccgct gggtaccgat ggtagaagcg tgaccacttc tgaaggcaat ggtagctgag cgggtccgag tggcgcgc | cacactggta accacatagt actgacaagc ggagtgaagt ggggttcatc ggctgctttc tccggctggc cctttcctgg tcgcctggag tcatcagacg gcttgccatg ctggttgtaa taaatagtgc gaagaggtgg aaagtagctg cagcagggtg gtccagcagc cgcgctgccg | ttttttttt acaaaggcag gtttctacag gtagataaatt agaaggatt agtacctgag ctttcccaga tcaggagctc tgcccaccag tacacgtcct gctgcatctg cagaggaagg ctcttggaag agaagttccg accaggtaaa taggcgctgt accatttgcg cctccaagg ctctccaagg ctgctgcacg ggacgcgtgg | agatggagag gcacgcctca aggacagggc taggcgggag gtggttctag atgggaggga agggagctgg cctgacagga cctctctgca tggactgggt tggccatgaa ctgccacaat acaggggcca aggcgaggat agttggtcca ccactttcag ggctcgcgct tggtgggac | gagacacaag cttcaggaaa tttgtttctt tattcacaaa aagcaggaag tgttctccc cttcctgga ctttggcaca aagctcctga tacacacgag accaaagatc ggaggcgatg gctgatacag cattatcaag cagggagctc cagggccgcg gggctgggcc | atctccttgg gagggtatct aaggcacttc ccccttcagc gcagaaaaca ggaaggctgg gagcaggaag ggaccaagg gggcctagg atcttatagg gctccggcta aggaggagca gtgagcacgc tcgcaaatgg cgcacacaga tgggtgcggg | 60 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1080 1140 1175 |
| <210> 1288 <211> 1340 <212> DNA <213> Homo | sapiens | | | | | |
| aagttttcat agtaccgagg tggtcctttc tttctctgtc ccacacgctt ggtgctcacc ggacctggtg tgtggcggac cctcttcatc | aactgggcac cccaggctgg tgcctgtgtt tgcctcccgg cccgggttcc aacagcgctg cacccgctgg atgaagaact gcctcacaca | ctcaaggtgg gaggaggcag atgcagagcc ttttctttt tccctctttt tgcccgccca agtgggaggc tctactgccc cagtggcgga tcggcttcga gtgagcgagc | gaggagctgc gggaaccgcc ttctcaaccg gccttgggtg gggcattgcc cgcctgtgtg cgagctgcac ccgagacaac ctggcccgga | ccgtcaagct tcctgtgtgc tctctttct tttctctcct acagggaagt aaggcgggca ttcagcgagt agcccagct gtctgggtcc | tggtgtgggc ttcatggcca ggctccctta gccgtcccgt accacgccgc ggaagtgtgg tcacctcagc cctgtgctgg acctggacat | 60 120 180 240 300 360 420 480 540 600 660 |

| actetteage | cgtgcctctg | aggaccctct | gctgaacctg | gtgtccccac | tgggctgtga | 720 |
|--|--|---|--|---|--|--|
| ggtggatgtc | gaggagggg | acgtggggag | ggactccaag | agacgcaggc | ttgtgtgagc | 780 |
| ctcctgcctc | ggccctgaca | aacggggatc | ttttacctca | ctttgcactg | attaatttta | 840 |
| agcaattgaa | agattgccct | tcatatgggt | tttggtttgt | ctttctggtc | gtcagcgtgg | 900 |
| tggtggaaac | agctgaagtt | ttaggagaca | gcttagggtt | tggtgcgggc | cacggggagg | 960 |
| ggaccgggaa | gcgctggggc | ttgtttctgt | ttgttactta | caggactgag | acatcttctg | 1020 |
| taaactgcta | cccctggggc | cttctgcacc | ccggggtgag | gcctcctgcc | tgcctggtgc | 1080 |
| cctgtcccag | ccccaggtcc | cgtgcagggc | acctgcgtgg | ctgacagcca | ggctcttact | 1140 |
| ccagccgggg | ctgccagcgc | atccagccag | cccagccctg | tgaaagatgg | agctgacttg | 1200 |
| ctgcagggga | cctgatttat | agggcaagag | aagtcacact | ctggcctctc | agaattcact | 1260 |
| | ttaaatacag | tcacaccgcc | ccctcaaaaa | aaaaaaaaa | aaaaaaaaa | 1320 |
| aaaaaaaaa | aaaaaaaaa | | | | | 1340 |
| -210- 1200 | | | | | | |
| <210> 1289 <211> 656 | | | | | | |
| <211> 656 <212> DNA | | | | | | |
| <213> Homo | saniens | | | | | |
| \Z13> 1101110 | Saprens | | | | | |
| <400> 1289 | | | | | | |
| | taattagaaa | atgcttcatt | gctttaaaaa | aaaaaaaatg | ctaatgatcg | 60 |
| | acaagcgtga | | | | | 120 |
| ctagaatggt | gaatccttcc | caggaggttt | tcagtgtact | ttgcccaaat | ccatcagagg | 180 |
| aatggctgtc | tatggcagct | atagccttat | aaagtgtatt | tcttaaataa | taaaactaga | 240 |
| aagtcaaaat | tactccttga | tttgcaagaa | ttactgcctg | gctgcaagaa | tggatgttgt | 300 |
| gttagcaggc | atgaacacaa | cattcatctc | cttatacatc | ttcatcagag | ctctgggtga | 360 |
| cttaggtgca | ttgtcagtga | gcagattttt | gggtttttt | gtttgtttgt | ttgttttgag | 420 |
| acagtctccc | tctgttgccc | aggctggagc | acagtggtgc | aatctcagct | caccacaacc | 480 |
| tctgcctccc | aggttcaagc | aattctcctg | cctcagctac | ttgggaagct | gaggtgggag | 540 600 |
| gatcacttga | gccgaggagg cagaaccaga | cagagattac | agtgagccaa | gatcatgcca | etgeaetgta | 656 |
| acctaaataa | cadaaccada | CCCTGTCTCA | 222222222 | aaaaaaaaa | adadaa | 0.10 |
| gcccgggcga | cagaaccaga | ccccgccca | aaaaaaaaaa | | | 525 |
| | cuguaccuga | cccgccca | aaaaaaaaa | | | |
| <210> 1290 | cuguaccugu | cccigccca | uuuuuuuu | | | |
| <210> 1290 <211> 927 | cagaaccaga | coccycocca | uuuuuuuu | | | |
| <210> 1290 <211> 927 <212> DNA | | coccycocca | aaaaaaaa | | | |
| <210> 1290 <211> 927 | | coccycocca | aaaaaaaaa | | | |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 | sapiens | | | | | |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca | sapiens | ttttgcctat | taatgtaatg | actattgaaa | tagatttccc | 60 |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca agtgggaaga | sapiens gtttttctcc cgtttcacgc | ttttgcctat tgaaggacca | taatgtaatg gtgtgtgcag | actattgaaa aggtgaaggc | tagatttccc aagagctgcg | 60 120 |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca agtgggaaga gcagatgggca | sapiens gtttttctcc cgtttcacgc gaaatgggtg | ttttgcctat tgaaggacca tcatgtgttt | taatgtaatg gtgtgtgcag gatatcatct | actattgaaa aggtgaaggc atgcagaaat | tagatttccc aagagctgcg cattagagtt | 60 120 180 |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca agtgggaaga gcagatgggc ggctgcagct | sapiens gtttttctcc cgtttcacgc gaaatgggtg gcttggtctt | ttttgcctat tgaaggacca tcatgtgttt tttctgtaaa | taatgtaatg gtgtgtgcag gatatcatct cagccatctt | actattgaaa aggtgaaggc atgcagaaat gctgtcctca | tagatttccc aagagctgcg cattagagtt gatgctggac | 60 120 180 240 |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca agtgggaaga gcagatgggc ggctgcagct agtgttaggt | sapiens gtttttctcc cgtttcacgc gaaatgggtg gcttggtctt ctgggaaggt | ttttgcctat tgaaggacca tcatgtgttt tttctgtaaa gggcagaggc | taatgtaatg gtgtgtgcag gatatcatct cagccatctt atgatgcttg | actattgaaa aggtgaaggc atgcagaaat gctgtcctca cccttttcat | tagatttccc aagagctgcg cattagagtt gatgctggac tgtgctactt | 60 120 180 240 300 |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca agtgggaaga gcagatgggc ggctgcagct agtgttaggt cttatccctc | sapiens gtttttctcc cgtttcacgc gaaatgggtg gcttggtctt ctgggaaggt ccagacaaaa | ttttgcctat tgaaggacca tcatgtgttt tttctgtaaa gggcagaggc tgaaaatcaa | taatgtaatg gtgtgtgcag gatatcatct cagccatctt atgatgcttg atgccgtttc | actattgaaa aggtgaaggc atgcagaaat gctgtcctca cccttttcat cagaaggcct | tagatttccc aagagctgcg cattagagtt gatgctggac tgtgctactt atcggagggc | 60 120 180 240 300 360 |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca agtgggaaga gcagatgggc ggctgcagct agtgttaggt cttatccctc tttggaccat | sapiens gtttttctcc cgtttcacgc gaaatgggtg gcttggtctt ctgggaaggt ccagacaaaa gaggaggagg | ttttgcctat tgaaggacca tcatgtgttt tttctgtaaa gggcagaggc tgaaaatcaa ccctgtcatc | taatgtaatg gtgtgtgcag gatatcatct cagccatctt atgatgcttg atgccgtttc gggcagtgtg | actattgaaa aggtgaaggc atgcagaaat gctgtcctca cccttttcat cagaaggcct caaggtatgg | tagatttccc aagagctgcg cattagagtt gatgctggac tgtgctactt atcggagggc gaagggatga | 60 120 180 240 300 360 420 |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca agtgggaaga gcagatgggc ggctgcagct agtgttaggt cttatccctc tttggaccat gcacaccatt | sapiens gtttttctcc cgtttcacgc gaaatgggtg gcttggtctt ctgggaaggt ccagacaaaa gaggaggagg ttaatgtgaa | ttttgcctat tgaaggacca tcatgtgttt tttctgtaaa gggcagaggc tgaaaatcaa ccctgtcatc gccctctttt | taatgtaatg gtgtgtgcag gatatcatct cagccatctt atgatgcttg atgccgtttc gggcagtgtg tccttctgat | actattgaaa aggtgaaggc atgcagaaat gctgtcctca cccttttcat cagaaggcct caaggtatgg ctctaagtgc | tagatttccc aagagctgcg cattagagtt gatgctggac tgtgctactt atcggagggc gaagggatga atagttccca | 60 120 180 240 300 360 |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca agtgggaaga gcagatgggc ggctgcagct agtgttaggt cttatccctc tttggaccat tgctttggct | sapiens gtttttctcc cgtttcacgc gaaatgggtg gcttggtctt ctgggaaggt ccagacaaaa gaggaggagg ttaatgtgaa tacttccaaa | ttttgcctat tgaaggacca tcatgtgttt tttctgtaaa gggcagaggc tgaaaatcaa ccctgtcatc gccctctttt | taatgtaatg gtgtgtgcag gatatcatct cagccatctt atgatgcttg atgccgtttc gggcagtgtg tccttctgat gaatgctggg | actattgaaa aggtgaaggc atgcagaaat gctgtcctca cccttttcat cagaaggcct caaggtatgg ctctaagtgc aatgaggaac | tagatttccc aagagctgcg cattagagtt gatgctggac tgtgctactt atcggagggc gaagggatga atagttccca tgtgggattc | 60 120 180 240 300 360 420 480 |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca agtgggaaga gcagatgggc ggctgcagct agtgttaggt cttatccctc tttggaccat tgctttggct agcccagtc | sapiens gtttttctcc cgtttcacgc gaaatgggtg gcttggtctt ctgggaaggt ccagacaaaa gaggaggagg ttaatgtgaa tacttccaaa actgagggcc | ttttgcctat tgaaggacca tcatgtgttt tttctgtaaa gggcagaggc tgaaaatcaa ccctgtcatc gccctctttt acctctcttg agagaggttg | taatgtaatg gtgtgtgcag gatatcatct cagccatctt atgatgcttg atgccgtttc gggcagtgtg tccttctgat gaatgctggg attggcttac | actattgaaa aggtgaaggc atgcagaaat gctgtcctca cccttttcat cagaaggcct caaggtatgg ctctaagtgc aatgaggaac ccaagcctga | tagatttccc aagagctgcg cattagagtt gatgctggac tgtgctactt atcggagggc gaagggatga atagttccca tgtgggattc ccactgtgtc | 60 120 180 240 300 360 420 480 540 |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca agtgggaaga gcagatgggc ggctgcagct agtgttaggt cttatccctc tttggaccat gcacaccatt tgctttggct agctgaatgt | sapiens gtttttctcc cgtttcacgc gaaatgggtg gcttggtctt ctgggaaggt ccagacaaaa gaggaggagg ttaatgtgaa tacttccaaa actgagggcc gagttgaagg | ttttgcctat tgaaggacca tcatgtgttt tttctgtaaa gggcagaggc tgaaaatcaa ccctgtcatc gccctctttt acctctcttg agagaggttg | taatgtaatg gtgtgtgcag gatatcatct cagccatctt atgatgcttg atgccgtttc gggcagtgtg tccttctgat gaatgctggg attggcttac gcattcttt | actattgaaa aggtgaaggc atgcagaaat gctgtcctca cccttttcat cagaaggcct caaggtatgg ctctaagtgc aatgaggaac ccaagcctga ggggctgggg | tagatttccc aagagctgcg cattagagtt gatgctggac tgtgctactt atcggagggc gaagggatga atagttccca tgtgggattc ccactgtgtc ggagatggaa | 60 120 180 240 300 360 420 480 540 600 |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca agtgggaaga gcagatgggc ggctgcagct agtgttaggt cttatccctc tttggaccat gcacaccatt tgctttggct agctgaatgt tggtgttttgg ttggtgttttg | sapiens gtttttctcc cgtttcacgc gaaatgggtg gcttggtctt ctgggaaggt ccagacaaaa gaggaggagg ttaatgtgaa tacttccaaa actgagggcc gagttgaagg | ttttgcctat tgaaggacca tcatgtgttt tttctgtaaa gggcagaggc tgaaaatcaa ccctgtcatc gccctctttt acctctcttg agagaggttg ggtgggttaa accacctgtt | taatgtaatg gtgtgtgcag gatatcatct cagccatctt atgatgcttg atgccgtttc gggcagtgtg tccttctgat gaatgctggg attggcttac gcattcttt | actattgaaa aggtgaaggc atgcagaaat gctgtcctca cccttttcat cagaaggcct caaggtatgg ctctaagtgc aatgaggaac ccaagcctga ggggctgggg gaggcagaag | tagatttccc aagagctgcg cattagagtt gatgctggac tgtgctactt atcggagggc gaagggatga atagttccca tgtgggattc ccactgtgtc ggagatggaa ccatgttaga | 60 120 180 240 300 360 420 480 540 600 660 |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca agtgggaaga gcagatgggc ggctgcagct agtgttaggt cttatccctc tttggaccat tgctttggct agccagtcagt tgcttttggct agccagtcagt tgcttttggct agccagtcag cagctgaatgt tgcttttgct | sapiens gtttttctcc cgtttcacgc gaaatgggtg gcttggtctt ctgggaaggt ccagacaaaa gaggaggagg ttaatgtgaa tacttccaaa actgagggcc gagttgaagg ctcttggtgt gaacaagcgg caggtaaggt | ttttgcctat tgaaggacca tcatgtgttt tttctgtaaa gggcagaggc tgaaaatcaa ccctgtcatc gccctctttt acctctcttg agagaggttg ggtgggttaa accacctgtt agggctccct agggctccct | taatgtaatg gtgtgtgcag gatatcatct cagccatctt atgatgcttg atgccgtttc gggcagtgtg tccttctgat gaatgctggg attggcttac gcattcttt cttgcccca gactgtgtac ctgcgacttt | actattgaaa aggtgaaggc atgcagaaat gctgtcctca cccttttcat cagaaggcct caaggtatgg ctctaagtgc aatgaggaac ccaagcctga ggggctgggg gaggcagaag gtgatatctg gccttatccc | tagatttccc aagagctgcg cattagagtt gatgctgctactt atcggagggc gaagggatga atagttccca tgtgggattc ccactgtgtc ggagatggaa ccatgttaga aacactcctc ttcagctcgt | 60 120 180 240 300 360 420 480 540 600 660 720 780 840 |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca agtgggaaga gcagatgggc ggctgcagct agtgttaggt cttatccctc tttggaccat tgctttggct agccagtcagt tgcttttggct agccagtcagt tgcttttggct agccagtcag cagctgaatgt tgcttttgct | sapiens gtttttctcc cgtttcacgc gaaatgggtg gcttggtctt ctgggaaggt ccagacaaaa gaggaggagg ttaatgtgaa tacttccaaa actgagggcc gagttgaagg ctcttggtgt gaacaagcgg | ttttgcctat tgaaggacca tcatgtgttt tttctgtaaa gggcagaggc tgaaaatcaa ccctgtcatc gccctctttt acctctcttg agagaggttg ggtgggttaa accacctgtt agggctccct agggctccct | taatgtaatg gtgtgtgcag gatatcatct cagccatctt atgatgcttg atgccgtttc gggcagtgtg tccttctgat gaatgctggg attggcttac gcattcttt cttgcccca gactgtgtac ctgcgacttt | actattgaaa aggtgaaggc atgcagaaat gctgtcctca cccttttcat cagaaggcct caaggtatgg ctctaagtgc aatgaggaac ccaagcctga ggggctgggg gaggcagaag gtgatatctg gccttatccc | tagatttccc aagagctgcg cattagagtt gatgctgctactt atcggagggc gaagggatga atagttccca tgtgggattc ccactgtgtc ggagatggaa ccatgttaga aacactcctc ttcagctcgt | 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca agtgggaaga gcagatgggc ggctgcagct agtgttaggt cttatccctc tttggaccat tgcttggct agccagtcd agctgaatgt tgcttggt tggtgttttg tgagcctcag acttcttccc ggactcctgg | sapiens gtttttctcc cgtttcacgc gaaatgggtg gcttggtctt ctgggaaggt ccagacaaaa gaggaggagg ttaatgtgaa tacttccaaa actgagggcc gagttgaagg ctcttggtgt gaacaagcgg caggtaaggt | ttttgcctat tgaaggacca tcatgtgttt tttctgtaaa gggcagaggc tgaaaatcaa ccctgtcatc gccctcttt acctctcttg agagaggttg ggtgggttaa accacctgtt agggctccct aacagagaag tcttgcatca | taatgtaatg gtgtgtgcag gatatcatct cagccatctt atgatgcttg atgccgtttc gggcagtgtg tccttctgat gaatgctggg attggcttac gcattcttt cttgcccca gactgtgtac ctgcgacttt | actattgaaa aggtgaaggc atgcagaaat gctgtcctca cccttttcat cagaaggcct caaggtatgg ctctaagtgc aatgaggaac ccaagcctga ggggctgggg gaggcagaag gtgatatctg gccttatccc | tagatttccc aagagctgcg cattagagtt gatgctgctactt atcggagggc gaagggatga atagttccca tgtgggattc ccactgtgtc ggagatggaa ccatgttaga aacactcctc ttcagctcgt | 60 120 180 240 300 360 420 480 540 600 660 720 780 840 |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca agtgggaaga gcagattgggc ggctgcagct agtgttaggt cttatccctc tttggaccat tgctttggt agccagtcagt tgctttggt tggtgttttg tgagcctcag acttcttccc ggactcctgg aaactcctca | sapiens gtttttctcc cgtttcacgc gaaatgggtg gcttggtctt ctgggaaggt ccagacaaaa gaggaggagg ttaatgtgaa tacttccaaa actgagggcc gagttgaagg ctcttggtgt gaacaagcgg caggtaaggt gtcacctcct aaaaaaaaaa | ttttgcctat tgaaggacca tcatgtgttt tttctgtaaa gggcagaggc tgaaaatcaa ccctgtcatc gccctcttt acctctcttg agagaggttg ggtgggttaa accacctgtt agggctccct aacagagaag tcttgcatca | taatgtaatg gtgtgtgcag gatatcatct cagccatctt atgatgcttg atgccgtttc gggcagtgtg tccttctgat gaatgctggg attggcttac gcattcttt cttgcccca gactgtgtac ctgcgacttt | actattgaaa aggtgaaggc atgcagaaat gctgtcctca cccttttcat cagaaggcct caaggtatgg ctctaagtgc aatgaggaac ccaagcctga ggggctgggg gaggcagaag gtgatatctg gccttatccc | tagatttccc aagagctgcg cattagagtt gatgctgctactt atcggagggc gaagggatga atagttccca tgtgggattc ccactgtgtc ggagatggaa ccatgttaga aacactcctc ttcagctcgt | 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca agtgggaaga gcagatgggc ggctgcagct agtgttaggt cttatccctc tttggaccat tgctttggct agccagtcagt tgctttgct tggtgttttg tgagcctcag acttcttcc ggactcctgg aaactctcca <210> 1291 | sapiens gtttttctcc cgtttcacgc gaaatgggtg gcttggtctt ctgggaaggt ccagacaaaa gaggaggagg ttaatgtgaa tacttccaaa actgagggcc gagttgaagg ctcttggtgt gaacaagcgg caggtaaggt gtcacctcct aaaaaaaaaa | ttttgcctat tgaaggacca tcatgtgttt tttctgtaaa gggcagaggc tgaaaatcaa ccctgtcatc gccctcttt acctctcttg agagaggttg ggtgggttaa accacctgtt agggctccct aacagagaag tcttgcatca | taatgtaatg gtgtgtgcag gatatcatct cagccatctt atgatgcttg atgccgtttc gggcagtgtg tccttctgat gaatgctggg attggcttac gcattcttt cttgcccca gactgtgtac ctgcgacttt | actattgaaa aggtgaaggc atgcagaaat gctgtcctca cccttttcat cagaaggcct caaggtatgg ctctaagtgc aatgaggaac ccaagcctga ggggctgggg gaggcagaag gtgatatctg gccttatccc | tagatttccc aagagctgcg cattagagtt gatgctgctactt atcggagggc gaagggatga atagttccca tgtgggattc ccactgtgtc ggagatggaa ccatgttaga aacactcctc ttcagctcgt | 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca agtgggaaga gcagatgggc ggctgcagct agtgttaggt cttatccctc tttggaccat tgctttggct agccagtcc agctgaatgt tggtgttttg tgagcctcag acttcttccc ggactcctgg aactcctca <210> 1291 <211> 1635 | sapiens gtttttctcc cgtttcacgc gaaatgggtg gcttggtctt ctgggaaggt ccagacaaaa gaggaggagg ttaatgtgaa tacttccaaa actgagggcc gagttgaagg ctcttggtgt gaacaagcgg caggtaaggt gtcacctcct aaaaaaaaaa | ttttgcctat tgaaggacca tcatgtgttt tttctgtaaa gggcagaggc tgaaaatcaa ccctgtcatc gccctcttt acctctcttg agagaggttg ggtgggttaa accacctgtt agggctccct aacagagaag tcttgcatca | taatgtaatg gtgtgtgcag gatatcatct cagccatctt atgatgcttg atgccgtttc gggcagtgtg tccttctgat gaatgctggg attggcttac gcattcttt cttgcccca gactgtgtac ctgcgacttt | actattgaaa aggtgaaggc atgcagaaat gctgtcctca cccttttcat cagaaggcct caaggtatgg ctctaagtgc aatgaggaac ccaagcctga ggggctgggg gaggcagaag gtgatatctg gccttatccc | tagatttccc aagagctgcg cattagagtt gatgctgctactt atcggagggc gaagggatga atagttccca tgtgggattc ccactgtgtc ggagatggaa ccatgttaga aacactcctc ttcagctcgt | 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca agtgggaaga gcagatgggc ggctgcagct agtgttaggt cttatccctc tttggacat tgctttggct agctgaatgt tggtgttttg tgagcctcag acttcttccc ggactcctgg aactcctca <210> 1291 <211> 1635 <212> DNA | sapiens gtttttctcc cgtttcacgc gaaatgggtg gcttggtctt ctgggaaggt ccagacaaaa gaggaggagg ttaatgtgaa tacttccaaa actgagggc gagttgaagg ctcttggtgt gaacaagcgg caggtaaggt gtcacctcct aaaaaaaaaa | ttttgcctat tgaaggacca tcatgtgttt tttctgtaaa gggcagaggc tgaaaatcaa ccctgtcatc gccctcttt acctctcttg agagaggttg ggtgggttaa accacctgtt agggctccct aacagagaag tcttgcatca | taatgtaatg gtgtgtgcag gatatcatct cagccatctt atgatgcttg atgccgtttc gggcagtgtg tccttctgat gaatgctggg attggcttac gcattcttt cttgcccca gactgtgtac ctgcgacttt | actattgaaa aggtgaaggc atgcagaaat gctgtcctca cccttttcat cagaaggcct caaggtatgg ctctaagtgc aatgaggaac ccaagcctga ggggctgggg gaggcagaag gtgatatctg gccttatccc | tagatttccc aagagctgcg cattagagtt gatgctgctactt atcggagggc gaagggatga atagttccca tgtgggattc ccactgtgtc ggagatggaa ccatgttaga aacactcctc ttcagctcgt | 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca agtgggaaga gcagatgggc ggctgcagct agtgttaggt cttatccctc tttggaccat tgctttggct agccagtcc agctgaatgt tggtgttttg tgagcctcag acttcttccc ggactcctgg aactcctca <210> 1291 <211> 1635 | sapiens gtttttctcc cgtttcacgc gaaatgggtg gcttggtctt ctgggaaggt ccagacaaaa gaggaggagg ttaatgtgaa tacttccaaa actgagggc gagttgaagg ctcttggtgt gaacaagcgg caggtaaggt gtcacctcct aaaaaaaaaa | ttttgcctat tgaaggacca tcatgtgttt tttctgtaaa gggcagaggc tgaaaatcaa ccctgtcatc gccctcttt acctctcttg agagaggttg ggtgggttaa accacctgtt agggctccct aacagagaag tcttgcatca | taatgtaatg gtgtgtgcag gatatcatct cagccatctt atgatgcttg atgccgtttc gggcagtgtg tccttctgat gaatgctggg attggcttac gcattcttt cttgcccca gactgtgtac ctgcgacttt | actattgaaa aggtgaaggc atgcagaaat gctgtcctca cccttttcat cagaaggcct caaggtatgg ctctaagtgc aatgaggaac ccaagcctga ggggctgggg gaggcagaag gtgatatctg gccttatccc | tagatttccc aagagctgcg cattagagtt gatgctgctactt atcggagggc gaagggatga atagttccca tgtgggattc ccactgtgtc ggagatggaa ccatgttaga aacactcctc ttcagctcgt | 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca agtgggaaga gcagatgggc ggctgcagct agtgttaggt cttatccctc tttggaccat tgctttggct agctgaatgt tggtgttttg tgagcctcag acttcttccc ggactcctgg aactcctcg c210> 1291 <211> 1635 <212> DNA <213> Homo | sapiens gttttctcc cgtttcacgc gaaatgggtg gcttggtct ctgggaaggt ccagacaaaa gaggaggagg ttaatgtgaa tacttccaaa actgagggcc gagttgaagg ctcttggtgt gaacaagcgg caggtaaggt gtcacctcct aaaaaaaaaa | ttttgcctat tgaaggacca tcatgtgttt tttctgtaaa gggcagaggc tgaaaatcaa ccctgtcatc gccctcttt acctctcttg agagaggttg ggtgggttaa accacctgtt agggctccct aacagagaag tcttgcatca | taatgtaatg gtgtgtgcag gatatcatct cagccatctt atgatgcttg atgccgtttc gggcagtgtg tccttctgat gaatgctggg attggcttac gcattcttt cttgcccca gactgtgtac ctgcgacttt | actattgaaa aggtgaaggc atgcagaaat gctgtcctca cccttttcat cagaaggcct caaggtatgg ctctaagtgc aatgaggaac ccaagcctga ggggctgggg gaggcagaag gtgatatctg gccttatccc | tagatttccc aagagctgcg cattagagtt gatgctgctactt atcggagggc gaagggatga atagttccca tgtgggattc ccactgtgtc ggagatggaa ccatgttaga aacactcctc ttcagctcgt | 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| <210> 1290 <211> 927 <212> DNA <213> Homo <400> 1290 ggcacgagca agtgggaaga gcagatgggc ggctgcagct agtgttaggt cttatccctc tttggaccat tgctttggct agctgaatgt tggtgttttg tgagcctcag acttcttccc ggactcctgg aactcctcg aactcctcag <210> 1291 <211> 1635 <212> DNA <213> Homo <400> 1291 | sapiens gttttctcc cgtttcacgc gaaatgggtg gcttggtct ctgggaaggt ccagacaaaa gaggaggagg ttaatgtgaa tacttccaaa actgagggcc gagttgaagg ctcttggtgt gaacaagcgg caggtaaggt gtcacctcct aaaaaaaaaa | ttttgcctat tgaaggacca tcatgtgttt tttctgtaa gggcagaggc tgaaaatcaa ccctgtcatc gccctcttt acctctcttg agagaggttg ggtgggttaa accacctgt agggctccct aacagagaag tcttgcatca aaaaaaa | taatgtaatg gtgtgtgcag gatatcatct cagccatctt atgatgcttg atgccgtttc gggcagtgtg tccttctgat gaatgctggg attggcttac gcattcttt cttgcccca gactgtgtac ctgcgactt ttgctacca | actattgaaa aggtgaaggc atgcagaaat gctgtctca cccttttcat cagaaggcct caaggtatgg ctctaagtgc aatgaggaac ccaagcctga ggggctgggg gaggcagaag gtgatatctg gccttatccc tttcttccat | tagatttccc aagagctgcg cattagagtt gatgctggac tgtgctactt atcggagggc gaagggatga atagttccca tgtgggattc ccactgtgtc ggagatggaa ccatgttaga aacactcctc ttcagctcgt ttgctacaga | 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |

```
120
cagtcagtgg tgtggggacc tgtgcctgca tcccatgatg ctgtctgcca ctgcccaaaa
                                                                      180
tgtatgggtc tacaagtcac acctcccttg tcattcactg ggctctggtt cgtggtgatg
                                                                      240
gcaaacatgg gatggcagcg aaccatactg acaaaggttg aggcccttca gcatggtgtg
                                                                      300
cagcetetea geatggacag tgggeeetga ageeactgea geteactgtt ceteteceae
cctacaggag gtagattggg aagtggagct ggccgtggtc attggaaaga aaggcaagca
                                                                      360
catcaaggtg aggtggaaag ggtgggctcc cagtccagag tgcagcagag gccccagctc
                                                                      420
ctgcctctcc tagttctgac ctcactcacc aacacacggt gccagctgtc cctgacacta
                                                                      480
ggaagcagtc agcctccttg ctccctgaca ctgcctttcc cttcacccac ctttggctgg
                                                                      540
                                                                      600
ctctggctac taacatggga taacagctta gagatccctt gccataggtg ttggtgtcac
ccatgatcta acctectgta tggccaaate ccetgeecee ataggecaea gatgetatgg
                                                                      660
                                                                      720
cccacgtggc cggcttcact gtggctcatg acgtgagtgc tcgtgactgg caaatgagac
gtaatgggaa acaatggctg ctgggaaaaa ccttcgacac cttctgccct ctgggccctg
                                                                      780
                                                                      840
ccttggtgac caaggacagt gtagcaggta ggtccctggt ccctgccccc ttatacctac
cattgcacag atgaacagcg cttcagggag gagcatgggt tcaggtacat gtggcacctg
                                                                      900
ccctccctgg ccgccctttc actgctgact ccatacaggg caagtctctt atcctcagcc
                                                                      960
                                                                     1020
acgagttete ceatgggett cetteceaag ecceetagag ggaacacaac tgeagaggat
                                                                     1080
gtgaaactgc atgcgtgaag taaattacaa agaacactga gctgatgggt ggatcgggct
                                                                     1140
tcctgcggct gccacctctg aaacaatcta agttgagcat catggagcat agttatccca
                                                                     1200
aggccaaggc attttccaca ctacaggaga tgaaagccag tgtgactcac ccagccactg
                                                                     1260
tggaaataga acagcactga ccacacacag tcaggataca gcgccaggat gggggcagtg
                                                                     1320
ccccagaggg cagagcgcag cctcttacac agccacccac aactgtggtg gaggtggggg
                                                                     1380
gtgtccacat gggccagcca tgccaggata ccaaagaccc cagtgcctca gcaccccatg
                                                                     1440
cagagtcctc agcaaagtta aattgtgttt cagctgctct acttaagggg ggtagaacac
                                                                     1500
taggaccacc accaacagta aaaagtgctg gttagccagg atgttcttac agtaatccat
                                                                     1560
cccctgccag catccagtac acgaggette tetgteccgg etagaaccat tgcctcactg
ctttatagat gctgagtctt ttttttgcct gggtgacaga gcaagattcc gtctcaaaaa
                                                                     1620
                                                                     1635
aaaaaaaaa aaaaa
<210> 1292
<211> 1246
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1038)
<223> n equals a,t,g, or c
<400> 1292
aggaaggaac cagggattag gctgtagggg ggtgagaagg agagaaggga ccacccatt
                                                                       60
cttctcaagc aaggattgcc agcgcgcgct gacacagtga tgggctgccc agggctggag
                                                                      120
gggacgctgt tcctcccgcc gccactgccc aacctttcct gataatcgtg gcatgcgccc
                                                                      180
tttcctcttc cctgccccac cccctggccg cagcaggcca gcactgcaga gtttgggtgc
                                                                      240
tggtggtgtg gctgtagggg aggggagacc acacccaagg tgggggctgt ggccatgtgt
                                                                      300
ggccgtgatg tcgatgatac tcgttttccc tgatccgtgg tgttgcagtc cgttgtcacc
                                                                      360
agccttgttt ctagtggtgt atatatgtcg cccccgtgat gcatatatac acaggtatta
                                                                      420
aatatatcgc tctatataat attatatatg tgtgtggtat ccaaggaatc acttttatga
                                                                      480
gggctaaaga taaagaattt ggccagaaaa tgcagccatc cttgtgtgat taggaggttt
                                                                      540
caggggccac tggactattt gcaaggtgac agggactgga gccatggctc agaggtgatt
                                                                      600
cgggcagcca gggacaggag ccaccetece caggeccaae tetgetaget teccagacca
                                                                      660
                                                                      720
ccccatcga gtgcggagag agtgggagtg ctcagggaaa gaaggtgatt tgtatttgtc
tccccgctga aaagaacagg attcaagtcc agagttttca tcttcagcct gtgatctgtc
                                                                      780
cagggaccct tgggatctgg ggcttcctgg cctggccaga gctggagccc ccacagggta
                                                                      840
aggaagagag agtgggaggc agagtgtgat ggggaggagg gacaggaaga cccttttaat
                                                                      900
gatgagggta actatttcag ttgtgagcct tctagggccc caggctggga ggctcagagg
                                                                      960
actgaatctg ggacctgtgt tcccccggc aggcagggac aagatggcat ggcaagcatg
                                                                     1020
ggggcggggt gggtgggnag ggatgctgca tttctcagct gggcagtaat caatttaatg
                                                                     1080
gtcctttaaa atgtctgtgt attaaaaatt taagaatacc acactttaat attaaatatt
                                                                     1140
                                                                     1200
cataaggtct agtatcttga taataatgta gatgttttaa taacaatttt tgtccttctt
                                                                     1246
aaaataaaat gaaagaaact tgcaaaaaaa aaaaaaaaa aaaaaa
```

```
<210> 1293
<211> 358
<212> DNA
<213> Homo sapiens
<400> 1293
ggcacgagaa gaactgccct tttctctttg aaaaaaaatg aacactaaag gcagagattt
                                                                60
tcatttggct gtctttgtat tcccacaacc aagcatggta cgtggttcaa gaaatggctg
                                                               120
tttaatcaca gcagtaactc ccagtaggaa agattctcaa aggaattgtt ctttaaaaaa
                                                               180
aaaaaaaatt cacaaagtag gctgtaccct caaagtgcta aggagagctt ctgtcctcga
                                                               240
aaatctccct gaaatactga aagcatacaa aaaaggagaa agctcaaaac taaattttga
                                                               300
358
<210> 1294
<211> 779
<212> DNA
<213> Homo sapiens
<400> 1294
                                                                60
tgtagtccgg ggacagccag ccgacgtgtt cccaaggctg ttcaaggtaa gcgtgcagag
                                                               120
ccccagagaa gacagtgaga ttctgtccct gagggtttcc ccacarcctg agtgatatga
                                                               180
tattccgact gagggaatgg aaacatcagg gctggtctgg ctgttgctgc tagagaagtt
                                                               240
300
360
agtcattcca ctctggatgc cactggcttc cttcaatgtt ttcttggctc aagccagcca
gatttattag ggttccttct aggccaagac tttgagggtg gggtttcatg tctagcaagg
                                                               420
                                                               480
tacatttccc atcttgcttt gctctgctta ttgggaaaag tcagcctttt ctgccgggcg
                                                               540
aggtggctca cgcctgtaat cccagcactt tgggaggccg aggcaggcag atcacgaggt
                                                               600
caggagatcc aggccatcct ggctaacatg gtgaaacccc gtctctacta aaaatacaaa
                                                               660
aaattagetg ggeatgttgg etggegeetg tagteeeage taetegagag getgaggeag
                                                               720
gagaatggtg tgaacccggg aggcggagct ttcagtgagc cgagattgtg ccactgcact
                                                               779
ccagcctggg caacagagcg agactccgtc tcaaaaaaaa aaaaaaaaa aaaaaaaaa
<210> 1295
<211> 446
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (12)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (26)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (441)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (446)
<223> n equals a,t,g, or c
<400> 1295
gctgtttccc angctaaagt tccgtngcac aatcacggct cactgcatcc tcaacctcat
                                                                60
ccttccaagt agctcagact ataagcacac gccccgttac tttgatgctc aaagtttccc
                                                               120
```

| aggtgtggcc atgggaggcg tcagtggctt ctctgttgcg tagggccatt ggtttgggtt gctcctgagt ttctgttgct agatactctg tgctcgtctt gtatgttctc aaccctggaa gcagccattt ctccaaggag cccttgttcc ctttagtgga gggtggtctg gatcttggtt agaagccaag atcaagattc tgggtgtgct cacagctcta ggttgttagc agacagagct ggaaagtgtg tatgtgaata caagtgcaca gttgtgggtg cgtctgtgta tgtgcgaata catgcgtctt tgtatatgat naaaan | 180 240 300 360 420 446 |
|--|--|
| <210> 1296 <211> 445 <212> DNA <213> Homo sapiens | |
| <pre><400> 1296 ggtaccgggt ccggaattcc cgggtcgacc cacgcgtccg ggaactgtga cttccccacc ccaaattcta tggccggcta atgttttgct atggtgacta tcacccatct acctggaagc accagaatgg cttagtacag ctagggagct cagccagatc tcggtgtctg ctgtttgaga ttgtgtggaa ggactattgc taagaagcag gagacagact gaacccagtg ttggccacaa gtgaggactg agacccaggt cacctcttgg ctgaacatgt tagcttgttg gtaaatggct ctgcagtggt tctgcatttt agtggggaat ttgttttggt tcatttttggc attcccgcaa ccatcttgtt ggttttttgg taaaatgtgg caccccytcc agacctytta gctgtggaam tgagrtattt tagcagggtc ccgtt</pre> | 60 120 180 240 300 360 420 445 |
| <210> 1297 <211> 1006 <212> DNA <213> Homo sapiens | |
| aggtttaggg gcaggtgcag tgtcaggagt cccccagcca ggccctggca ctagaggcca tgcggccaga cttggatgtg gcagtggtct tggggcaggt gctgcaggct ctaccactct tgcaccagctc ctttgtggtg tggcaggat ggcctggaa ggccaccgg ggatggagtg ggaagacagg aggcactggg ggaagacagg aggcactggg ggacagcatgt ggctggggag caggtgggat ttccccaaga aggcactggg ggaagacagg tccaggaat ggctggggtg aggtagtggggag caggtgggag caggtgggat ggctggggat ggctggggat ggctggggat ggctggggat ggctggggat ggctggggat ggctggggat ggctggggat ctgcacagct gggcacctgg cagagatcc aggtggcaac tggcagaagg ttgaagagg cagcgctcag ctgtagggat ggctggggat ggggaaaggat gggggaaattg ggggaaattg gggggaaattg ggggaaattg ggggaaattg ggggaaattg ggggaaattg ggggaaattg ggggaaattg gggaaattg ggaaattga gaaatagaa gaaatgatg ttgaagaat tggccaagg cacaggtgac catgacagga ccttgcacta acgcagctgc cacaggcaag aggggtttag gaaattatat ggaaaatgaa gcaagagat attatctttt tctttttct tctccatctc gtaaaaaaaaa aaaaaaaaa ctcgag | 60 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1006 |
| <pre><212> DNA <213> Homo sapiens <400> 1298 ggcacgaggg ttcacacaac tggaacccat ctccaggaac aaacagctgg aacccatctc ccgttgaagg gaactgcca gatttttgta agattcttcc tcctgggcac ctctaagata ctgatggctc tgcagaggac ccattcattg cttctgcttt tgctgctgac cctgctgggg ctggggctgg tccagccctc ctatggccag gatggcatgt accagcgatt cctgcgggcaa cacgtgcacc ctgaggagac aggtggcagt gatcgctact gcaacttgat gatgcaaaga cggaagatga ctttgtatca ctgcaagcgc ttcaacacct tcatccatga agatactgg aacattcgta gtatctgcag cacaccaat atccaatgca agaacggcaa gatgaactgc catgagggtg tagtgaaggt cacagattgc agggacacag gaagttccag ggcacccaac tgcagatatc gggccatagc gagcactaga cgtgttgtca ttgcctgtga gggtaaccca</pre> | 60 120 180 240 300 360 420 480 540 |

| accttacact | tgcactttga tactccttaa catttcctac | atagcagtga | gtaatgcatt | tgagctgtcc | caggctctgt | 600 660 720 |
|------------|--|-------------|-------------|-------------|------------|-------------------|
| eteeteaget | Cattteetac | | tacacaaccc | tagaattta | tataataaa | 780 |
| ccaaagagat | atggagacat | aaacctgtaa | tgaatgagge | taggetttte | cytaataage | 840 |
| ttccttttat | aatactggtc | agcttagctc | tctcagatcc | tatcctgtgg | aatttagtta | |
| ttatgtgtat | ttatgtagta | tttcaaacat | ttcaaaatgc | tttcatctat | gtttatcaca | 900 |
| ttttaatacc | acagcactta | taatgatgtc | actacatata | gaagctcaaa | gttaagggat | 960 |
| ttgctgaaga | ctgtaaagtt | aatggaagaa | ttgagacaaa | aatccagtgt | agctggccac | 1020 |
| ttatccaggg | ctttttctac | ttcatcacaa | ggaatgtttt | gaaagtgtct | gcttttttta | 1080 |
| tccttaaaat | tcacctgtca | gggaggcatt | aaaaatttgg | aaatgtatgc | cagcaaaatg | 1140 |
| tgagctctgt | attttttggc | attcttatgt | ttgggtttaa | taagattaag | aaaatgatac | 1200 |
| tgggaatttt | ctttttcctg | aaactttgaa | tcaccctagt | aagtcaaagt | actaaaaaat | 1260 |
| gtactagate | attaagactt | atgtgctctt | actgattgaa | agattttttg | ttttccttgt | 1320 |
| aataaaggac | ctaaaccgaa | ggtacctgaa | aaaaaaaaaa | aaaaaaaaa | | 1369 |
| aacaaaggac | Coddacogaa | 330000 | | | | |
| <210> 1299 | | | | | | |
| <211> 676 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | caniene | | | | | |
| <213> HOMO | sapiens | | | | | |
| <400> 1299 | | | | | | |
| <400> 1299 | agacccatga | tasaaaasta | + aacaaaaaa | taactaaaaa | gagaaaaagg | 60 |
| ggcacgagtg | agacccatga | ttaggggatg | ctacttata | aggaggtttt | tattattatt | 120 |
| aaatgtcttg | tgttgttttg | tteeetgee | ececticete | tagttetage | tatttatata | 180 |
| gttgttgttc | ttagacaagt | geeteetggt | geetgeggea | attendatt | ttaaggttgg | 240 |
| agcaaatgcc | acaggccacc | tatagctaca | tactcctggc | attgcacttt | ttaaccttgc | 300 |
| tgacatccaa | atagaagata | ggactatcta | agccctaggt | ttctttttaa | attaagaaat | |
| aataacaatt | aaagggcaaa | aaacactgta | tcagcatagc | ctttctgtat | ttaagaaact | 360 |
| taagcagccg | ggcatggtgc | tcacgcctgt | aatcccagca | ctttgggagg | ccgaggcgga | 420 |
| tcataaggtc | aggagatcaa | gaccatcctg | gctaacacgg | tgaaaccccg | tctctactaa | 480 |
| aagtacaaaa | aattagctgg | gtgtggtggt | gggcgcctgt | agtcccagct | actcgggagg | 540 |
| ctgaggcagg | agaatcgctt | gaacctgaga | ggcggaggtt | gcagtgagcc | aaaattgcac | 600 |
| cactgcacac | tgcactccat | cctgggcgac | agtctgagac | tctgtctcaa | aaaaaaaaa | 660 |
| aaaaaaaaa | | | | | | 676 |
| | | | | | | |
| <210> 1300 | | | | | | |
| <211> 1061 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| 1210 | | | | | | |
| <400> 1300 | | | | | | |
| actaggaact | gcttgccact | teettaaaac | ctctgatttt | aggttctatt | atatcttgtt | 60 |
| taaattccto | aggtattgtg | agtcagctaa | aatottataa | accaaatcct | attttcccat | 120 |
| ttacattttc | accttaagat | atttcgtctt | cattccaacc | ctctctctca | aattggtaag | 180 |
| ccttaaacac | ttcaccagac | taggacagtt | tctatttaaa | gaagetettt | gccatctatg | 240 |
| tatagagag | gttgaatagc | cattottato | tttcagtctg | tctctctcac | atatttacat | 300 |
| tatagagage | gccgaacagc | aatagaatag | agttttgttt | cattettete | cctttctaaa | 360 |
| tectatacas | aattgggtgg | cccttcttac | attassact | attttctctt | gttccttttt | 420 |
| teeteteeaa | aattgggtgg | agatttgagt | accaccattt | ctccttactt | gggccttacg | 480 |
| tteteatetg | ccaaattcca | acactcact | agcaccaccc | ataataaaca | caccatctcc | 540 |
| agggccttag | ccaaattcca | geeegtgeet | teegeeggta | grageragera | taacataaaa | 600 |
| gacattctcc | tccatcttcc | tricgregaga | tatatatta | gaactccata | tgacataaga | 660 |
| attccacggc | tttcacctcc | taaatgctca | cougicitte | tttttt | caaatgttga | 720 |
| ctttcaatgg | ctttcaatct | tcttttctca | gtcactactt | | ttttgagacg | 780 |
| aagtccagcc | tgggtggcag | agtgaggctc | catctcaaaa | aaaaaaaaaa | aaaaaaaaaa | 840 |
| aagcactttg | ggaggccgag | gtgggcgaat | cacggggtcg | ggagatcgag | accatcctgg | |
| ctaacacggt | gaaaccccat | ctctactaaa | gatacagaag | grrggccggg | cgtggtggcg | 900 |
| ggcgcctgtg | gtcccagctg | tttgggaggc | tgaggcaggg | gaatggcgtg | gacccggggg | 960 |
| gcggagcttg | cagtgagccg | agatcctgcc | metgemetee | agcctgggtg | acagggtgac | 1020 |
| agagcgggac | tccatctcaa | aaaaaaaaaa | aaaaaactcg | a | | 1061 |
| | | | | | | |
| <210> 1301 | | | | | | |
| <211> 2046 | | | | | | |
| | | | | | | |

```
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (63)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1670)
<223> n equals a,t,g, or c
<400> 1301
                                                                    60
catgtgaccc tctgactcag gttttgtgtt cttctagtgg aagragcctg ggagagccag
                                                                   120
gcntcccsgg actgctagcc tgcttttcct ggggtccctg gagccggaga agaaccagga
                                                                   180
tgttgctgcc tgcagaagct cagctcagga agacttccag gaacctgagg aggagctgcc
                                                                   240
actaacagcc atatttccca atggagactg tgatgacctt ggaagggggt caaaagcctg
                                                                   300
tgatggagtc gtacacactc ctgctgagcc caccggagac tcaagatgaa ggctggaccc
                                                                   360
ttgcgctgtc cctggctcta acctacagac tggggcctgg ctccgtctta ctggccccca
                                                                   420
ggtctccatg gagactgcag aaacccccgc ctgctggagg cctgccacac tcacagttac
                                                                   480
cagctagaca gtggggctta ctaagacaag caggacctaa aacagtgtct cccctgggaa
                                                                   540
cctactcccc acccagcatt tgctaagtct gatcacaggg aggttatttt gtctctctgt
                                                                   600
ctcggtttct ctgagccact gagacagatg gctgtccgct ttgaggctct gcagagytgt
                                                                   660
ggcaccccat ggtgtgtctg cagtgttctg ggcacatgca tgggcaccca tcgttgagag
tgcagctggg aagaactctg aaccagaagt catcagagct gaggcatggc cttgaacatg
                                                                   720
                                                                   780
tcactcagtc tctggggctt ctgtttcaca aatgcatgag ggggccacca gcccagtggc
                                                                   840
tttaaaccag gggcaggttg tccctccagg cagcattgga aatgtgtgtg tgttgagggg
                                                                   900
gtcacagtga ctgtgggggc accctggcat ctagtgggca tcccacaatg tgcagaacag
                                                                   960
tctctgacag caaagaattg gtccattcaa tgccaattgt agtacctttg agacattctg
                                                                  1020
qctqaqcaat qccttctccc tgtcagagtc ccccagagca gagagggtca ggcttccctg
gaccttggct cccagagcaa gccaaaataa agactacact gttgccttgg gggcttgtcg
                                                                  1080
ggccagggcc aagacggtct gcgtgctgca gggccaggac agaaatagcc acacatgccg
                                                                  1140
gtgagaacaa agageetett tettteteat gttgaeateg aetttetgtg ecaagteett
                                                                  1200
                                                                  1260
tgggtataag gatgctaggg aattcctata ggcaccaaac agaaggaaag ctaggggctt
ggactactgg gtataggact tgctctagct ctcaggtcct agcccaagct caatgcaaac
                                                                  1320
                                                                  1380
acagececte eggetetetg titetgtgag gitetggaat ecetteetet gigteegiga
                                                                  1440
gtctgacaga atcgatgatg ttcccttaga gctgggaaat ccatgtgttt attcacggag
ggaactcacc attacctccc ttgtcttctt tgcctgcctt ggagaaatcc agagtcttcg
                                                                  1500
                                                                  1560
tcccttcatt catgatgcac agtttacgca gcagacacac aactgtgcct actatttgct
                                                                  1620
                                                                  1680
cggtgcctg caaggtgctg cctaactttg atttgttatt tcaasctmtn ctcccataat
                                                                  1740
agggagtcta atccctattc cttccctgcc tgatgaggat gktgtgagga tgaggaggac
ggcatctcat ttgggggcttt ttggcagtgg gcctcatttt aatcctgcag ggctgcctgc
                                                                  1800
                                                                  1860
cagtggatct atccagctgc ttccttgtag ccaagaatga gttcaatgaa ttgtgattca
ctgattttat tgattttgtt ttaaaacagg gagactggta tttttgaagc tgctatcatt
                                                                  1920
                                                                  1980
ttctatttct ttattaattt ctttgtaatc atcttattaa agttttctta tttagtggga
                                                                  2040
2046
actcga
<210> 1302
<211> 577
<212> DNA
<213> Homo sapiens
<400> 1302
                                                                    60
aggttatgcc tctatccctt ttttttcctt agtttttatg ttgaagaacc cagggagagt
taaccaaagt ttgaatttta ctgattgtac actcatgttg catctttctt cattccttgt
                                                                   120
atattttgca aattggttac tgaactcaga gacttggtca gactctggtt cggtctcttt
                                                                   180
agcaatactg taggcagtgt tgtgttcttt catggggagg cagaagtctg gttttctctt
                                                                   240
ttttttaaat catgtccgca gttgttgggc tcagtgccca gatccattaa tttatcaatg
                                                                   300
```

```
360
gtttaaaaat agtgacattc taattgtgtg ggttttttta aaattttttg ttggaatact
tttattaaga gatgcttctg cttacctgct gttcagttat ccagtggcac agttatatag
                                                                    420
                                                                    480
gaaaggtagg atatatactt gattctttgc ctttatttat tctttttca aaatagtgac
                                                                    540
577
ttttgagacc ctgactctta aaaaaaaaa aaaaaaa
<210> 1303
<211> 2108
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (5)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (34)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (41)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2045)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2075)
<223> n equals a,t,g, or c
<400> 1303
                                                                      60
atcontaatc eggeacttgt agaagteete catngagttg necaagttee tagattagat
                                                                    120
ttggttagca cctttgcaga cttcaggcct gatgtgtgtt tttcttagta caccatatca
ggaggcacag atatggatca gttctattac tggttatgtt aacttcagct tggttaagat
                                                                    180
                                                                    240
ggtgtctgcc aggtgtctcc attgtaagtt attcattttc cctttacaat taataagatc
                                                                    300
ttgtrgggwa gaaagtaatc tttctttaaa taaagcagca atagaatgag agatttttaa
                                                                    360
acatataaaa agcagaaaaa tataaatgaa tcaggagtaa agtaacatta aaaattggaa
                                                                     420
tacatttaaa gaaccatcta ctaatttcta accatatatt atttttaata atggtcttaa
                                                                     480
aatttctttt tctatagaca ccaaatctgg ctgaatgaaa taaattggtg ataagtggaa
                                                                     540
aaaaqaqaaa aaccaatgat tcataacaat gtatgtgaaa gtgtaaaata gaatgttact
                                                                     600
ttggaatgac tataaacatt aaaagaagac tggaagcata caactttgta catttgtggg
                                                                     660
ggaaaactat taattttttg caaatggaaa gatcaacaga ctatataatg atacatgact
                                                                    720
gacacttgta cactaggtaa taaaactgat tcatacagtc taatgatatc accgctgtta
                                                                    780
gggttttata aaactgcatt taaaaaaaga tctatgacca gatattctcc tgggtgctcc
                                                                     840
tcaaaggaac actattaagg ttcattgaaa tgttttcaat cattgccttc ccattgatcc
                                                                     900
ttctaacatg ctgttgacat cacacctaat attcagaggg aatgggcaag gtatgaggga
                                                                     960
aggaaataaa aaataaaata aataaaatag aatgacacaa atttgagttt tgtgaacccc
                                                                    1020
tgaacagatg gtcttaagga ygttatctgg aactggagaa aagcagagtt gagagacaat
                                                                    1080
tctatagatt aaatcctggt aaggacaaac attgccatta gaagaaaagc ttcaaaatag
                                                                    1140
acctgtggca gatgtcacat gagtagaatt tctgcccagc cttaactgca ttcagaggat
aatatcaatg aactaaactt gaactaaaaa ttttttaaac aaaaagttat aaatgaagac
                                                                    1200
acatggttgt gaatacaatg atgtatttct ttattttcac atacactcta gctaaaaagag
                                                                    1260
caagagtaca catcaacaaa aatggaaaca aggctttggc tgaaaaaaac atgcatttga
                                                                    1320
                                                                    1380
caaatcatgt taatagctag acaagaagaa agttagcttt gtaaacttct acttcatttg
                                                                    1440
attcagagaa acagagcatg agttttctta aaagtaacaa gaaaaggaac aaaaaaaatg
```

<212> DNA

```
aggtttgaaa tcttttacca tggcaaaaca ttaacatctt tctcaaaaac atagagaaat
                                                                   1500
                                                                   1560
ctggaaaaat caagaagata aaattctgga ccagttagtg acattctttc aagcatactt
                                                                   1620
gtaaaatgtt tccttaaagt gttcttggga tgaaaatgat tgtcatgtct ccaacaacag
                                                                   1680
tgaactgatg ttgttccttg gaataaaagt caatccccac cttaaaaaaat gtatggcttc
                                                                   1740
tttgaggaat tettatgtet taaagaettt ttaeatteta gaeaattaaa ttgattgagg
                                                                   1800
tcataaatta agaagtgaat agttaccact acacggtaag gtaagcagcc tgaaagcatt
1860
aaaaaamtyc ttctacttgt actttggcat tcaattttta gaaattcagt ctcaaatgcc
                                                                   1920
attatggtat ttttcaaatg atacctttaa gtcaatggtt tctttcgact gcaatagaga
                                                                   1980
agatatggca agaaaaatgt tgcagtacca tcttctggga gaacattcat gaaatccttc
                                                                   2040
                                                                   2100
agttntagtt ccacagcaac aattgacaat gtttntttta atgatgacag gtagagttga
tacttctc
                                                                   2108
<210> 1304
<211> 1026
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (971)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1003)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1004)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1007)
<223> n equals a,t,g, or c
<400> 1304
ttccccactt tctcatcctc tttcctgtgc accataactt ccccagcagt agtctccagt
                                                                     60
gggaatttgg gagggcagga cagaagccaa atccaggccc tgagcaaaca gaacgctaga
                                                                    120
tgatatcgtc agggagcagc aggtatgcag agacctggga cctactcctg tttctgcgac
                                                                    180
tgacatgetg tgcacactgt gcatggacce catggcacga tgcaggacgg ggctgcagaa
                                                                    240
cccacacaag ctttgaggtc agacagtcca cgaatcccag ctctaccacc cacagctttt
                                                                    300
cctcttctca gctgtgtggc cttgggcaaa ttgcataacc tctctgaaac tactgtcata
                                                                    360
tctttaaaat gagtaggaaa tgagacctcc tttgcaaggt aattgtgagg attaagttgt
                                                                    420
gagggttaat tgttctaggt gctttcaccc agaacaatac accagcatat aaaactgacc
                                                                    480
tccaacaaat atgaagtcac tttatccttg tctggcctgt tctgcctctt caattctatg
                                                                    540
caatgaggca taaaaactcg gatgtcctgg gcctccacgt tttacatgta taaaactggg
                                                                    600
gtatcctgta atcccagcac tttggggggc caaggtgggc agatcacctg aggtcaggag
                                                                    660
ttcgagacca gcttggctaa catagcaaaa ccctgtttct actaaaaata caaaaataat
                                                                    720
tegeegggee tggtggeatg cacetgtggt ceeagetact caggeteetg agtaacttgg
                                                                    780
                                                                    840
attgcaggca catgccacca ggcccagctg attttttcaa attgtctcac tatgttgccc
                                                                    900
aggetggtet caacttetgg getcaagtga tacttecace ttageeteet attagttttt
                                                                    960
cccttacagc aattcctgca atatataaaa ggtctttact tcaagtgagc tgtgaatgca
ccactgcaat ntccagcttg gcagaggatg acagagaccc tgnnttncaa aaaaaaaaa
                                                                   1020
aaaaaa
                                                                   1026
<210> 1305
<211> 1103
```

```
<213> Homo sapiens
<400> 1305
ggcacgagtg aattttttta aaacaatcta gccatcatca aggtgctata agagttgtat
                                                                       60
                                                                      120
aaaaqatatt tttggcattt ctaggcaagt atcagccaat aagtatgtta gtgatatcac
agattgtacc aactattaac tatgttaaat aagtattcag tttcatgtga tctctgggaa
                                                                      180
aaaaatatgc tgccttggtg ctaatattgt atgtatttaa atgatcatcc gactcagaaa
                                                                      240
tataaacact tttaatgaaa gggaggaacg gaaggacaat ttccagtgca cagaatcact
                                                                      300
tggatgaaat aagaccagct ctttaccctt atttttggat atgccttttt tggaagagac
                                                                      360
ttagacttta tccttattgt tgttagtgtt gttaatattc gttgcttcag cccacggtgc
                                                                      420
                                                                      480
cttggtctct ccacaatcaa atggaggatc ccccaagcag cttcattaca gagtgatatt
gggaaagtga gatcctctca ccattttgcc aagatactct aaaatgacat ccaagtttac
                                                                      540
cagtagaaag acacaggatg cacagaatgg gcatgacctt cagctcacga gcacacctgg
                                                                      600
                                                                      660
agaaattcag aaccaggttc tgaatcatca cgattgcctt ttgcatgaaa acatcggctg
gtgatgtgac ttctcttcag gccatgagcc taacaccctg ccggttttca tgcccgctgc
                                                                      720
                                                                      780
agtaatggac gtttgtgtga agaaatgaac tgtggagtac aaaatgcttt gagtctttcc
                                                                      840
gattgctcat taattcactt ttttgttact tctttccaaa atggaagtgc tgaagccatg
                                                                      900
qtctttctgc ccctccaagc tgatgaaggg aagcctttgc caatggccca tggaagacac
                                                                      960
ttggtttgag aaaccctgcc cacttccaaa gaccaaagag attaggaaaa gcctggcagt
                                                                     1020
attctccaac tccaaacaag ctctagagtg ctccaggaaa agttatattc agtatatgaa
                                                                     1080
taagtgttat tctccattat taatgtgttc tgaaaatata ttatgaataa atacatcacc
                                                                     1103
acacccaaaa aaaaaaaaaa aaa
<210> 1306
<211> 1421
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1267)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1297)
<223> n equals a,t,g, or c
<400> 1306
                                                                       60
gcacctgact gcccacacag atggaaaggt ggcaatgagg aaggcagaag ttgggcctca
tcaggtgtgt ccaccatatg ggcacaggaa gcacaagaga gggcaggccc tcctaccacc
                                                                      120
caactgcaaa gaagcaagga agtgggggga aggggatggg atacaatgac tgactagcct
                                                                      180
gttgaggtgt agtgatcctg ccccagagtg aggaaaggac acagagattc tccttccaca
                                                                      240
ggtaggggtg tcttccagtc ctgggtgaag aaaacattta tgcatagcac cctgctcata
                                                                      300
                                                                      360
gcaggggttc cacagttcca gcagtaatgt ttgagataag gactgctctg tcgttgaggc
ttatccccct ctttgtgtct acatgtggag ttacccagaa ataagaacat ctgggttctt
                                                                      420
                                                                      480
aaaaagtagc atcccaacac accaactttg atgcccactc cctccttcga tgctcaactt
                                                                      540
tgccctcagc tataggagat ccgagaacag tgactattcc aagactaaaa cctgactccc
                                                                      600
tccttggtac attctaattc tcctcaacag caccactgag taacaaggac actgcctaag
                                                                      660
qtaaqtaaqg gtcctcaatt ccccccaagt ttactagcac atgcataaaa tattattaac
                                                                      720
accatgaatg gaagaggatg acgggataaa agaaattagg cttaataaag tgaatgtcta
                                                                      780
taaaggaaga ccagatcctg aaatgaaaag gcaaaactta tttgtgagct ttggttaaat
                                                                      840
ttatcatgaa aattacactt attaatgttt tattgytatt aacagcatcc gaacaatcct
                                                                      900
catcttttga agatgccagg agcaattcgg aatactatct gattgaatgt gaacctgcct
                                                                      960
ggttaattta ttacctgatt tgatgaacca aggaaagcca tgcktttaaa caaatattta
                                                                     1020
catttaatat gggaacataa aagagcttta aatattatag actttgtacc tgttatatat
atgaatattc cctatgttaa ataataataa taactagtgt ttatgaatag aatcatatca
                                                                     1080
                                                                     1140
tctttagaaa ttgtttaaaa ttagttctgg gaagttgaaa gtggggaatg aagagataat
                                                                     1200
aaataaaact agattggcca tatgtttata attttttwag attgggtaat gaatacatgg
                                                                     1260
agtttcatta tacttttctc tccacttttg tctatgttga aaattttctg ggagctaaat
                                                                     1320
gatgagnaca catgggacac mtgrtggggg acaacanaca ctaaggcctg ttgaggcagg
```

```
gagtcggcag agagagagca tcaggaagaa tagctaatgg atgctgggct tcatacctgg
                                                                     1380
                                                                     1421
gtgatgagat gatctgtgca gcaaagcacc atggtacatg t
<210> 1307
<211> 845
<212> DNA
<213> Homo sapiens
<400> 1307
gctgttttgg gttccccagc tacagtcgga aagacatcag agtgttcaag gcggagtcca
                                                                       60
ggcctgagat ctcagcaggc cagacaggca gcagatgctt gttgcttttc ttgtgttata
                                                                      120
tttttcgttc ccttacttag catttgtggg accaaagcca acaaacaaca ggttgttaaa
                                                                      180
                                                                      240
agaatgagag taatttgact tccgacagtg attggggctc ggggttgttg ggtgttttgt
                                                                      300
tttctgattt gaaactagct gtatggtaac cactaactct cgccttattc tttaatggaa
ttttggaaag gcctcactcc agtgactctt tggatctttc ttcyctaagt agatgggaag
                                                                      360
cctgtaagaa gagacttgga ggcaaagcaa agggaatcag cacttaaccc tcacccaaag
                                                                      420
                                                                      480
ggcccaagag aatctttagt aactggaggc agagcagact ggagcctcta yggggcatct
                                                                      540
ccccatattg gagaattcag tctttgtttt ggaaatctta taatgtcttt ggagaggctt
                                                                      600
taaataattt tgtttttctt agcaatgtta tgctctattt tgagacatgg atttttttt
tettetagtg tttetetet gaggeaaage ceaacacace tgtettttgt ceaettetee
                                                                      660
                                                                      720
agcaaattag atttgtctct gggaatgtgt ttgtaacata ccaacctact gcagaccagc
                                                                      780
agagggagct cccatgttga atttgtttgt tagctatttt cccccctttc acaaaaacta
                                                                      840
tttcttgacg acctttgaga gatttcaata aaaattttaa tcagagcaaa aatgaaaaaa
                                                                      845
<210> 1308
<211> 1781
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1363)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1377)
<223> n equals a,t,g, or c
<400> 1308
gttttaatgg ataaatttgt gtgttgattt tggaggaata aactcagaat actccctaaa
                                                                       60
gatagtgaat tttggtctgg gtaatgaaaa gtaggaatat aattgattgg aataatgttg
                                                                      120
tcatatgttg ttttaatgtt tatcttaaaa ttagtaactt ttccaaggaa aattttattt
                                                                      180
                                                                      240
gatagcataa cttctctgga tattatttta aatcagtctg gtaaagagaa aaaatacaga
aagtattata atttgtgttt tcatcataaa atattttgca tcagtatctt attgcagtac
                                                                      300
                                                                      360
ggtaggagac tatgagaaat attttgaatc ttaaaagtac cagataaaga cacaataact
                                                                      420
aatgattttg tetttaggag ggecagaaet aattgateet getggtetge cattacetea
                                                                      480
qccagctcag tcctgggtat ggcttgtgga tctagaaaga mcaattgctc tccttattgg
                                                                      540
qcqqtqtctt qqtqqcatgc ttcagggctc ccctgtgtct ccagaggaac aggacactgc
                                                                      600
atattggatg aaaacgccac tgttcagtga cggtgtagaa atggacactc ctcaattggg
                                                                      660
taatgtgctt ctctgcagca tttaaaatac atgcctgttt gtacctcagt tggagatttc
                                                                      720
tctattctga tttgctaaat agagaactga caggcaccaa ttgcaacatt agcagtgtag
                                                                      780
ggaatctggg gctatgactt ggagccctaa gaaaaatggt taaatcgtgc agcacaatat
                                                                      840
ggtgaaaaga gcccccagag gaaatagaaa ttgtaggtct ggtcctactc tgtcatattt
                                                                      900
atcactcatt ttgagcaagt catctaactc aatgcttcat cacttatttt ccgaggcttg
                                                                      960
gaggttatga aactgcttcc cagaatgtaa agcactgtaa gagtacttma ccatgactta
tcagtgcmgc acccctgaga tgtgagtggc agcctctttt cctcccagcc tgtcttgctt
                                                                     1020
tcatgctgac attatattat gtcctaattt tttcttcgcc acttaaagtg cctttagaat
                                                                     1080
                                                                     1140
ttcccttctg cagcatctcc catttgtata tattgstggc aggctagwwc ctagactgar
catgaagact tatctggtac cccagataat ccagttgktt tatctagaat tggtccttta
                                                                     1200
```

```
1260
atctctctag gcttctaawt ttgattctat aaaataatga tttggattag acaggctaca
                                                                1320
tgatattatt agatctaaaa tttattattt ctctgataag acaaagagac tcaacatgtc
                                                                1380
cctgaaggaa agtctaagag agactgagag gaaagaagga gancggaaaa gaaaagnaaa
                                                                1440
aacaaaacaa aatgagaaag attatacttt gggatttgga gggttggaga gtgggagtga
                                                                1500
tatgaaccag aaagtgattt tggccatggc tggtgaatgt tggactggtg tttatgaaac
                                                                1560
attttgttaa agaaagtaaa atcatggttt ttcaaggggt ytttaacatg ataaagataa
                                                                1620
ttccactgct gtcagtgttt aaccttgtga cagtcctaaa ggacctcctg agaacaaaaag
                                                                1680
                                                                1740
tatctctatc tctaccctct tcatatttct gttatattta ttcaattaaa ctggccttta
atatgaagaa aaaaaaaaaa aaaaaaaaa aaaaactcga g
                                                                1781
<210> 1309
<211> 919
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (11)
<223> n equals a,t,g, or c
<400> 1309
                                                                  60
ttacttaatt ntactgtcat accatgctat tacctacact cctgtgtgca gtgggcattc
                                                                 120
agtaaatgtg tgttgaagga ctgggacgta cgtggaggct gctggacctg gtcagagact
                                                                 180
gatgtgcctt agcggcaatg gttagagctt ttcagtgcat cccacctccc tgtcgccccc
                                                                 240
atgctcggct tcctcacatt caggagcctg acttggatca gacttggggc tgcacagtgg
agcaggtggg ttcccgtgtc attagtaata aggagagggt tgggggtggg cagggctcca
                                                                 300
qaaaqtcaqc agtgtgcctg ggcacccacc ccatcctcta cctgccacac ctcagagggt
                                                                 360
                                                                 420
tcctacaqct qcacacaaqc aqttgagagt tgatgaccag gcccataggg ctcccacagc
tggttcccag gccagtgagt gctgtgagaa tacagtagca caagtccttg ttctctgaag
                                                                 480
agtgggaagg agaggagtga gtgaagtagc ctgtcccctg caggtcctct gcgatggcat
                                                                 540
                                                                 600
tqtctcqqtt cccqcaqtqc tqcaqtqtqq aaggqaqtqc cccatcctca ttacaqatqa
cacactggag tgtggagggg tcgatgactt gtgcagggtc atatggtacc taaggggcag
                                                                 660
atctcagact taaacacaat tgatgtctaa cccctagaca gtctttttag tgccctctgc
                                                                 720
                                                                 780
tctcagtctt gttgccctag tatcaagcaa tcttagacaa acatcctgaa ttcttacaaa
cttacctcta aactctgagg ataaagttgc cagtcctttt aatggtcagc ctaatcattc
                                                                 840
                                                                 900
919
aaaaaaatc caagggggg
<210> 1310
<211> 495
<212> DNA
<213> Homo sapiens
<400> 1310
ccacgcgtcc ggtagatctt aactgtactc acccctccaa tacacaccat acatgcacaa
                                                                  60
                                                                 120
aatggtaact gtgtgtggta atggctgtgt aatctgtggt aatcacaaat taatgtatat
                                                                 180
caaatcacca tgttgtgcat gtttaatata tgtaattttt atttgtcaat tatgcctcac
                                                                 240
caaagcttgt gggtggggg aataatgaac tctgatgtaa ggtatggcct ctgggttatg
                                                                 300
atqtqtaaat qcaqqctcat caqtcccaca aatgtcccac tctgggggaa tgtgagaatg
gagactgtgc atgtgtgggg gcatggggta tatgggaact gtaacttccc ttccattttc
                                                                 360
                                                                 420
tgtgaagtta aaactgcttt tttaaaagtc tgtttaaaaa ataaaaataa aatgaagaat
                                                                 480
495
aaaaaaaaa aaaaa
<210> 1311
<211> 1483
<212> DNA
<213> Homo sapiens
<220>
```

```
<221> SITE
<222> (508)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (711)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1021)
<223> n equals a,t,g, or c
<400> 1311
gaattcggca cgagcaaaca cagtttcaca ctgattctta acattttgtt caacttttac
                                                                       60
tcagagggca ggctgagcca gggagcaaaa aggcaaagga ctcctactca catacccact
                                                                      120
                                                                      180
tagcaaaacc aaagcacctt gggctttgaa cccacccttc ttagaaggca ggtttgggg
                                                                      240
ttgaggcccc ttgagaagct cacttcaccc tctccccatg ccatcccatt cctacccatc
ccaagatgct tctcttgtat ttctttcagc acatccagcc atctccctgg ggagcgtttc
                                                                      300
atatctgact ctttatactt ccagtgatgt tttggcatcc ctaatagact ggctcccaag
                                                                      360
                                                                      420
gcagtettta atcaggagte tteecetaat etageteete aagaacecaa gggaagagge
                                                                      480
acaaagagaa gtatgaatag gaagatagaa gggtaaccca gtcagagagg gagtggcaga
                                                                      540
tgacactgct gaaaaggagt ttccaganag ttgcacacca tgagccacgc tgtctgtccc
                                                                      600
tgaccacaac ctccactggc caccacctcc tgggcttccc ctccctccac ccacagaaac
                                                                      660
cattgctcaa tctcaactgg actcttgmag gcctatytct mcctccaaac agagaytcct
ggacacagag ctgcagacct ctaaccactc ctggaacata aaaaaaacca nggtggttct
                                                                      720
                                                                      780
acagcattta cacctccagt ttccctcaga cagaatccag aagagaagaa cctcgctgat
                                                                      840
ctctgagcgg agcatgtctc caagctcagg ccagccccaa aactccaatg gcctcaactg
                                                                      900
gagtggaaat ccctcaaagg cacaaaccca gttcctacca tctccctcag tgcctggcaa
tgtttgtggt tggttgagtg agttaacagg agaccatctt ttggcctttt ttctacctct
                                                                      960
gttttctctt actatacttg cctacatctc atcttctggt caacaccagg tactcacccc
                                                                     1020
                                                                     1080
ntgagettet tgtgaacttg tetggggeee aceggeetaa acateatett ttttgtttgg
aattaagctt tgttgaactt ttcacaggtt tcatttatgc aaatgcctgt gatgggacaa
                                                                     1140
                                                                     1200
aaaggtctgc aaacatggaa acctggtcta aagatgtcca aagtaaactg tctgtggagt
                                                                     1260
cgaatgacat ttgagccctg gacctaaact ccaaatccaa gctctttccc actgtgacct
                                                                     1320
tgggcctctc aaggctcagt ttcctcacct ataaactgta gagaagccaa twacagactc
atccacacta tgaggctgtg cataaggtca tgtatgtaaa actacttgct ttgttgatca
                                                                     1380
ttctgtccca gataagtatg aattattatg catcatttca ttaaacaaga aagcttcact
                                                                     1440
gtgttaatat gcacaagtaa aaaaaaaaaa aaaaaaaact cga
                                                                     1483
<210> 1312
<211> 1332
<212> DNA
<213> Homo sapiens
<400> 1312
                                                                       60
ggcacgagaa aaaacattaa gacagaactt aaaaacaata gattgactat aatccaaaga
cgagtgtacc tctaaccaca attttcattt atttttaaat gtttccttca tggcctttct
                                                                      120
tgtggctcac cctatgcagt ttgtgtattt gttgacaact ttatgtgttt ttaatatggt
                                                                      180
ttttgccaaa cttggttttt ccgagaccgt cttttctcag aggctcagtt ttaccgtcct
                                                                      240
                                                                      300
atctgcagtc ggctactttc agtgggcaga agaggccaca tctgcttcct gtaggccctc
                                                                      360
tgggcagaag catgcgctgg tgtctcctcc tgatctgggc ccaggggctg aggcaggctc
                                                                      420
ccctcgcctc aggaatgatg acaggcacaa tagaaacaac ggggaacatt tctgcagaga
                                                                      480
aaggtggete tateatetta caatgteace teteeteeac caeggeacaa gtgacecagg
tcaactggga gcagcaggac cagcttctgg ccatttgtaa tgctgacttg gggtggcaca
                                                                      540
tctccccatc cttcaaggat cgagtggccc caggtcctgg cctgggcctc accctccagt
                                                                      600
cgctgaccgt gaacgataca ggggagtact tctgcatcta tcacacctac cctgatggga
                                                                      660
                                                                      720
cgtacactgg gagaatcttc ctggaggtcc tagaaagctc agtggctgag cacggtgcca
ggttccagat tccattgctt ggagccatgg ccgcgacgct ggtggtcatc tgcacagcag
                                                                      780
                                                                      840
tcatcgtggt ggtcgcgttg actagaaaga agaaagccct cagaatccat tctgtggaag
```

```
900
gtgacctcag gagaaaatca gctggacagg aggaatggag ccccagtgct ccctcacccc
                                                                     960
caggaagctg tgtccaggca gaagctgcac ctgctgggct ctgtggagag cagcggggag
                                                                    1020
aggactgtgc cgagctgcat gactacttca atgtcctgag ttacagaagc ctgggtaact
gcagcttctt cacagagact ggttagcaac cagaggcatc ttctggaaga tacacttttg
                                                                    1080
                                                                    1140
tctttgctat tatagatgaa tatataagca gctgtactct ccatcagtgc tgcgtgtgtg
                                                                    1200
tgtgtgtgtg tatgtgtgtg tgtgttcagt tgagtgaata aatgtcatcc tcttctccat
cttcatttcc ttggcctttt cgttctattc cattttgcat tatggcaggc ctagggtgag
                                                                    1260
taacgtggat cttgatcata aatgcaaaat taaaaaatat cttgacctgg ttttaaaaaa
                                                                    1320
                                                                    1332
aaaaaaaaa aa
<210> 1313
<211> 1676
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1669)
<223> n equals a,t,g, or c
<400> 1313
                                                                      60
tattaagatt gacaggtttt tscacatttt tggaaatgtt taatttgtac actgatttac
                                                                     120
tactctracc aataattgtt gatgagtgta tgagcatcat gaatgcgtgc attgaactac
                                                                     180
tgtctgtgtc tttatgtttt aacttctttc aagatgtagc catcagttac tgcactgcta
                                                                     240
ttactgactt aaatggacct ttttsctttt acaaactata cttatctatg gttctttgtt
                                                                     300
gaagaactca ggagttcgac attaatagaa attagaaaat tttataatgt attataaaat
ccattactaa gttgaaagta tgcttttaac tctgtgtatc aggggatgta tgtttgtgtg
                                                                     360
                                                                     420
gagatgtttt tttctgtctg taggcacatg tatatatccc agtaagttct tattttcatt
                                                                     480
tcatttctac atttttatga acttgtttta taagggtact gtttagttgt gataattaaa
                                                                     540
tatatataaa agetttetga gagattattt aetatatgaa tatattttea getggetgat
                                                                     600
caaaagtatt tttaaaattt tgyttttagc cattcaaaat gtatttgtat tttcagaatt
                                                                     660
gaatgcaagt catacttaga gctcaattaa aatactcttg caagaaaaag cattaaattc
tctttgagaa ttccqtgaaa tqcaaattaa gggaaaaata ggttttaagc agtagcaaaa
                                                                     720
acacaccgct aaaaatggcc tttgaattct cagagctatg gaaaaatgtg agaaactaaa
                                                                     780
ttgtctcgag atgtcaagat ttttctatct ccagttgcta ttggcctgtc ctactgttgt
                                                                     840
                                                                     900
ctttgaatat ttcctgtatt ccacccaaa agatttcaac ttttagtttt tctatcactg
                                                                     960
ggcaaggtca gactgggttt ataaaacaat atattggcat attgtgattc tttgtaattg
                                                                    1020
actataaatt ggttttgaaa tgtccaaaca tacgttgtgt gtctttatat tgtactgtgt
gttttaagta actggcagaa aaagaattgg aaatgaaatt tccaatcaga caatgtagta
                                                                    1080
                                                                    1140
ttaaagaaaa ctttgtttta aatatgcggt accatgtaaa attactcgtg ttaggaataa
agtccactgt tgaagttgaa tgtcactaag cttattatgt taaaaggaac cagtgtgatt
                                                                    1200
                                                                    1260
aggaaaacct accagaagcc agatacagtg tggtacgtgc aacatttcat gcacattttg
                                                                    1320
attttgtttg tcattcaaaa ttgtgcttgt aaaaatgtat acaatttctg agttttataa
                                                                    1380
tttctaggta cttgtttttt cttgctggta aatagctttt ttttaaaaaa aaatctaata
taaaagaaac catgtttata ttttgttagt gatcaatgac tttgtttata tggaaatttg
                                                                    1440
tatattgttg gcacacattt tgttgaggtt tacgtgcatg aaggcctgca ataattagca
                                                                    1500
                                                                    1560
caatgaaaac tgctttttct tacatgttca tttttttgaa agattgtggt gcaaaggctt
                                                                    1620
actctaataa gtaaccttct ggactatgga atgaatataa atgaatggca ctttgagtgt
1676
<210> 1314
<211> 947
<212> DNA
<213> Homo sapiens
<400> 1314
ctgcaggaat tcggcacgag gaagctttga taacataaat tgcttgcctg ccatttaaca
                                                                      60
atttttgaaa tgaattattg tctaaatagt ttcaatatat gttttatttt atgaatttaa
                                                                     120
caaaattett ttttettgat ttagetaatt ttaatagagt gttttettat caaacattta
                                                                     180
cttatcttct aaaactccat tcttgcaaac tgtttggagg gatttgtttt tattttatt
                                                                     240
```

300

ttgtagtata gctcatgtat ctagaataac ttgttatgtt tattatttca tcatcataaa

| ttggcttata | tttcatatgc | ttgcagacat | atagaataat | cgaaaacaac | aaaattatat | 360 |
|-------------------------|------------|------------|------------|------------|------------|------|
| | | acatatgtaa | - | - | | 420 |
| | | ttacatgttt | | | | 480 |
| | | atactttttc | | | | 540 |
| | | tatttattaa | | | | 600 |
| | _ | aaggtattta | | | _ | 660 |
| | - | ggtctttgtg | | | | 720 |
| | | atttattaaa | = | _ | | 780 |
| - | - | tctttggatg | - | | | 840 |
| | | atcactgtga | | | | 900 |
| - | | aaaaaaaaaa | | | Ccccaacaac | 947 |
| tyaaaaaaaa | aaaaaaaaaa | aaaaaaaaaa | aaaaaaaaaa | accegag | | 94, |
| <210> 1315 | | | | | | |
| <211> 1744 | | | | | | |
| <211> 1/44 <212> DNA | | | | | | |
| <213> Homo | canione | | | | | |
| \213> 1101110 | saprens | | | | | |
| <400> 1315 | | | | | | |
| | gagagaggt | accagagtgt | gattgattgt | acctetatee | taccataca | 60 |
| | | acaccttggt | - | | | 120 |
| | _ | tttttttgtt | | | | 180 |
| | | actttcactt | | | | 240 |
| | | | | | | 300 |
| | | acccccaacc | | | | 360 |
| | | tgtgaaaccc | | | | 420 |
| | | | | | - | 480 |
| _ | | gccctgcaac | | | | 540 |
| | - | gactgactgt | = | | | |
| | | tggaattatt | | | _ | 600 |
| | | gaggatgggt | | | | 660 |
| | _ | aaacaaggca | | | | 720 |
| _ | | tttcctctgg | _ | | - | 780 |
| | - | aaaattatcc | | _ | | 840 |
| | | ttgtaggagt | _ | | | 900 |
| - | | aaatcatcat | | | | 960 |
| | | atggtggact | | | | 1020 |
| _ | | catgcattta | | _ | | 1080 |
| | | cagtcagcca | | - | - | 1140 |
| _ | | ctttgctttt | - | | | 1200 |
| | | agtttctttt | _ | | - | 1260 |
| • | ~ ~ ~ | cagcatatgt | _ | | _ | 1320 |
| | | taggaaaaag | | | - | 1380 |
| | _ | gtgaccttga | _ | | | 1440 |
| - | _ | actcatgctt | | | | 1500 |
| | | cagagagaag | | | | 1560 |
| | | ctcttctgca | | | | 1620 |
| | | actttttgtt | | | | 1680 |
| | acttaaaata | ataattaaaa | sttaccagct | taaaaaaaaa | aaaaaaaac | 1740 |
| tcga | | | | • | | 1744 |
| 040 4046 | | | | | | |
| <210> 1316 | | | | | | |
| <211> 1744 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| 400 | | | | | | |
| <400> 1316 | | | | | | |
| | | accagagtgt | - | | | 60 |
| | _ | acaccttggt | | | | 120 |
| | | tttttttgtt | | | | 180 |
| | | actttcactt | - | | | 240 |
| | | accccaacc | | | | 300 |
| cttctgtacg | ctctcttcc | ctctcctccc | tctcttttct | taatttcagg | gactccttcc | 360 |
| | | | | | | |

| acagatctag | tttcaggaaa | tgtgaaaccc | agttgtcaca | gggcagctaa | gaaaagccat | 420 |
|---|--|--|--|---|--|---|
| cttcattcgt | ggagactgtg | gccctgcaac | cctggagaag | gacttgctgg | tacttaaaaa | 480 |
| | tgccacccag | | | | | 540 |
| | ccaggaacca | | | | | 600 |
| | | | | | | 660 |
| | tggcgggatg | | | | | |
| | acaatgtacc | | | | | 720 |
| | tgagagatga | | | | | 780 |
| attgcctgag | gaaaaatgga | aaaattatcc | accagtcgat | tcaaactgaa | tttcactctt | 840 |
| | cagggcaaac | | | | | 900 |
| aagccttact | acaattccaa | aaatcatcat | ggttggaaat | ttgggaggag | attatttgtg | 960 |
| aacttgttac | ccttttggta | atggtggact | aattgctgta | tagttatttt | tgttttatta | 1020 |
| ttactgttac | attaatttaa | catgcattta | tagaagaata | cattcaaagc | actgatgtag | 1080 |
| | gtacttggag | | | | | 1140 |
| | tccgataatg | | | | | 1200 |
| | tctgggacca | | | | | 1260 |
| | | | | | | 1320 |
| | tgctgtctgt | | | | | |
| | caaaggactt | | | | | 1380 |
| | taatatgact | | | | | 1440 |
| | tccctttgca | | | | | 1500 |
| | taaggcactt | | | | | 1560 |
| aacactawcc | aaggtggcac | ctcttctgca | atgtttaacc | ctgctagtaa | tgaacgatga | 1620 |
| cttagttcgg | atatwwcaga | actttttgtt | tataccatca | ggtatgcatg | aatttataat | 1680 |
| | acttaaaata | | | | | 1740 |
| tcga | | | • | | | 1744 |
| - | | | | | | |
| <210> 1317 | | | | | | |
| <211> 1982 | | | | | | |
| <211> 1302 <212> DNA | | | | | | |
| | anniana | | | | | |
| <213> Homo | saprens | | | | | |
| | | | | | | |
| 400 1015 | | | | | | |
| <400> 1317 | | | | | | |
| | gaggagcgct | tccgccctca | gtggagcctg | agagacactc | tcgtaagtac | 60 |
| ggcacgagcc | gaggagcgct aagaaagtga | | | | | 60 120 |
| ggcacgagcc atgcaaacta | | aattcttcct | gaaatggcat | ctcagttccc | agaagcgata | |
| ggcacgagcc atgcaaacta ctgctcgcca | aagaaagtga gctgtgtctc | aattcttcct agtgtggaaa | gaaatggcat acagctgctg | ctcagttccc tgctgaaatg | agaagcgata gaatcgagaa | 120 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga | aagaaagtga gctgtgtctc attatttcct | aattcttcct agtgtggaaa cagctatctt | gaaatggcat acagctgctg tggatgactt | ctcagttccc tgctgaaatg tggagagaag | agaagcgata gaatcgagaa actcctctct | 120 180 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga cctcgtctgc | aagaaagtga gctgtgtctc attatttcct ggcgtggact | aattetteet agtgtggaaa cagetatett tgateatgga | gaaatggcat acagctgctg tggatgactt ctggtgcctt | ctcagttccc tgctgaaatg tggagagaag tgcattcaga | agaagcgata gaatcgagaa actcctctct aggagagctg | 120 180 240 300 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga cctcgtctgc tcagcgtaga | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa | aattcttcct agtgtggaaa cagctatctt tgatcatgga gaccaaggcg | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc | 120 180 240 300 360 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga cctcgtctgc tcagcgtaga cgagctgttt | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg | aattcttcct agtgtggaaa cagctatctt tgatcatgga gaccaaggcg tacatacatg | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta | 120 180 240 300 360 420 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca | aattcttcct agtgtggaaa cagctatctt tgatcatgga gaccaaggcg tacatacatg atgaagatta | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt | 120 180 240 300 360 420 480 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agacttgtag | aattcttcct agtgtggaaa cagctatctt tgatcatgga gaccaaggcg tacatacatg atgaagatta ctcagccaca | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt ccgttcgcct | 120 180 240 300 360 420 480 540 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg ctggcactgc | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agacttgtag ccacccctct | aattcttcct agtgtggaaa cagctatctt tgatcatgga gaccaaggcg tacatacatg atgaagatta ctcagccaca tttttttt | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa cttctaattc | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc tgtactcaca | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt ccgttcgcct aaagagaatc | 120 180 240 300 360 420 480 540 600 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg ctggcactgc tcattttctt | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agacttgtag ccaccctct ctttcttcca | aattcttcct agtgtggaaa cagctatctt tgatcatgga gaccaaggcg tacatacatg atgaagatta ctcagccaca ttttttttt ttcccttaaa | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa cttctaattc ttctgagtac | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc tgtactcaca tgtacatata | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt ccgttcgcct aaagagaatc tttctgggtt | 120 180 240 300 360 420 480 540 600 660 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg ctggcactgc tcattttctt cccacgatga | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agacttgtag ccaccctct ctttcttcca tgtgaaaaac | aattcttcct agtgtggaaa cagctatctt tgatcatgga gaccaaggcg tacatacatg atgaagatta ctcagccaca ttttttttt ttcccttaaa taccagactg | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa cttctaattc ttctgagtac | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc tgtactcaca tgtacatata tctcacaaag | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt ccgttcgcct aaagagaatc tttctgggtt acaagaaaaa | 120 180 240 300 360 420 480 540 600 660 720 |
| ggcacgagcc atgcaaacta ctgctcgca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg ctggcactgc tcattttctt cccacgatga tcagggcatt | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agacttgtag ccaccctct ctttcttcca tgtgaaaaac ttgtgagtgc | aattcttcct agtgtggaaa cagctatctt tgatcatgga gaccaaggcg tacatacatg atgaagatta ctcagccaca tttttttt ttcccttaaa taccagactg cttaagatca | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa cttctaattc ttctgagtac tttttgtct aactaacag | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc tgtactcaca tgtacatata tctcacaaag atctgacct | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt ccgttcgcct aaagagaatc tttctgggtt acaagaaaaa ctcccctcac | 120 180 240 300 360 420 480 540 600 660 720 780 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg ctggcactgc tcattttctt cccacgatga tcagggcatt agtgagccac | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agacttgtag ccaccctct ctttcttcca tgtgaaaaac ttgtgagtgc | aattcttcct agtgtggaaa cagctatctt tgatcatgga gaccaaggcg tacatacatg atgaagatta ctcagccaca tttttttt ttcccttaaa taccagactg cttaagatca cagagggtaa | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa cttctaattc ttctgagtac ttttttgtct aactaacaag gagccaaaag | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc tgtactcaca tgtacatata tctcacaaag atctgacct cctcattgtg | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt ccgttcgcct aaagagaatc tttctgggtt acaagaaaaa ctccctcac aaaggcactg | 120 180 240 300 360 420 480 540 600 660 720 780 840 |
| ggcacgagcc atgcaaacta ctgctcgca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg ctggcactgc tcattttctt cccacgatga tcagggcatt agtgagccac gacttggacc | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agacttgtag ccaccctct ctttcttcca tgtgaaaaac ttgtgagtgc tgccccactt agggacacca | aattetteet agtgtggaaa cagetatett tgateatgga gaceaaggeg tacatacatg atgaagatta eteageeaca tttttttt tteeettaaa taceagaetg ettaagatea cagagggtaa teagggeett | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa cttctaattc ttctgagtac tttttgtct aactaacaag gagccaaaag ggttttctca | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc tgtactcaca tgtacatata tctcacaaag atctgacct cctcattgtg cgcataaaat | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt ccgttcgcct aaagagaatc tttctgggtt acaagaaaaa ctcccctcac aaaggcactg ggagagtgga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| ggcacgagcc atgcaaacta ctgctcgca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg ctggcactgc tcattttctt cccacgatga tcagggcatt agtgagccac gacttggacc | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agacttgtag ccaccctct ctttcttcca tgtgaaaaac ttgtgagtgc | aattetteet agtgtggaaa cagetatett tgateatgga gaceaaggeg tacatacatg atgaagatta eteageeaca tttttttt tteeettaaa taceagaetg ettaagatea cagagggtaa teagggeett | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa cttctaattc ttctgagtac tttttgtct aactaacaag gagccaaaag ggttttctca | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc tgtactcaca tgtacatata tctcacaaag atctgacct cctcattgtg cgcataaaat | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt ccgttcgcct aaagagaatc tttctgggtt acaagaaaaa ctcccctcac aaaggcactg ggagagtgga | 120 180 240 300 360 420 480 540 600 660 720 780 840 |
| ggcacgagcc atgcaaacta ctgctcgca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg ctggcactgc tcattttctt cccacgatga tcagggcatt agtgagccac gacttggacc ttaatcgcca | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agacttgtag ccaccctct ctttcttcca tgtgaaaaac ttgtgagtgc tgccccactt agggacacca | aattcttcct agtgtggaaa cagctatctt tgatcatgga gaccaaggcg tacatacatg atgaagatta ctcagccaca ttttttttt ttcccttaaa taccagactg cttaagatca cagagggtaa tcagggcctt tgatctgaca | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa cttctaattc ttctgagtac tttttgtct aactaacaag gagccaaaag ggttttctca ttttgaatt | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc tgtactcaca tgtacatata tctcacaaag atctgacct cctcattgtg cgcataaaat atgagagaaa | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt ccgttcgcct aaagagaatc tttctgggtt acaagaaaaa ctcccctcac aaaggcactg ggagagtgga ctagatgact | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| ggcacgagcc atgcaaacta ctgctcgca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg ctggcactgc tcattttctt cccacgatga tcagggcatt agtgagccac gacttggacc ttaatcgca gtaaacttgg | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agacttgtag ccaccctct ctttcttcca tgtgaaaaac ttgtgagtgc tgccccactt agggacacca aagattcttc tcacaggcct | aattcttcct agtgtggaaa cagctatctt tgatcatgga gaccaaggcg tacatacatg atgaagatta ctcagccaca tttttttt ttcccttaaa taccagactg cttaagatca cagagggtaa tcagggcctt tgatctgaca ggttctggca | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa cttctaattc ttctgagtac tttttgtct aactaacaag gagccaaaag ggttttctca ttttgaatt gtctttgcg | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc tgtactcaca tgtacatata tctcacaaag atctgacct cctcattgtg cgcataaaat atgagagaaa gactttttc | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt ccgttcgcct aaagagaatc tttctgggtt acaagaaaaa ctcccctcac aaaggcactg ggagagtgga ctagatgact tagcattatg | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg ctggcactgc tcattttctt cccacgatga tcagggcatt agtgagccac gacttggacc ttaatcgcca gtaaacttgg ccaaataaac | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agacttgtag ccaccctct ctttcttcca tgtgaaaaac ttgtgagtgc tgccccactt agggacacca aagattcttc tcacaggcct atgcagtctc | aattetteet agtgtggaaa cagetatett tgateatgga gaceaaggeg tacatacatg atgaagatta eteageeaca tttttttt tteeettaaa taceagaetg ettaagatea cagagggtaa teagggeett tgatetgaea agttetggea agtgtgetet | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa cttctaattc ttctgagtac tttttgtct aactaacaag gagccaaaag ggtttctca ttttgaatt gttctttgcg cgcatgtatg | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc tgtactcaca tgtacatata tctcacaaag atctgaccct cctcattgtg cgcataaaat atgagagaaa gactttttc aatatctagt | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt ccgttcgct aaagagaatc tttctgggtt acaagaaaaa ctcccctcac aaaggcactg ggagagtgga ctagatgact tagcattatg cctttctgtg | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 1080 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg ctggcactgc tcattttctt cccacgatga tcagggcatt agtgagccac gacttggacc ttaatcgcca gtaaacttgg ccaaataaac gttctcagcc | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agacttgtag ccacccctct ctttcttcca tgtgaaaaac ttgtgagtgc tgccccactt agggacacca aagattcttc tcacaggcct atgcagtctc aagacataaa | aattetteet agtgtggaaa cagetatett tgateatgga gaceaaggeg tacatacatg atgaagatta eteageeaca tttttttt tteeettaaa taceagaetg ettaagatea cagagggtaa teagggeett tgatetgaea ggttetggea agtgtgetet aactaggaet | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa cttctaattc ttctgagtac tttttgtct aactaacaag gagccaaaag ggttttctca ttttgaatt gtctttgcg cgcatgtatg cagagcacat | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc tgtactcaca tgtacatata tctcacaaag atctgaccct cctcattgtg cgcataaaat atgagagaaa gactttttc aatatctagt acaaaaccag | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt ccgttcgcct aaagagaatc ttctgggtt acaagaaaaa ctcccctcac aaaggcactg ggagagtgga ctagatgact tagcattatg cctttctgtg ttatgttcg | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 1080 1140 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg ctggcactgc tcattttctt cccacgatga tcagggcatt agtgagccac gacttggacc ttaatcgcca gtaaacttgg ccaaataaac gttctcagcc gaaagagga | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agacttgtag ccaccctct ctttcttcca tgtgaaaaac ttgtgagtgc tgcccactt agggacacca aagattcttc tcacaggcct atgcagtctc aagacataaa aaagagtccc | aattetteet agtgtggaaa cagetatett tgateatgga gaceaaggeg tacatacatg atgaagatta eteagecaca tttttttt tteeettaaa taceagaetg ettaagatea cagagggtaa teagggett tgatetgaea ggttetggea agtgtgetet aaetaggaet egageeegga | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa cttctaattc ttctgagtac tttttgtct aactaacaag gagccaaaag ggtttctca ttttgaatt gttctttgcg cgcatgtatg cagagcacat tcttgtctg | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc tgtactcaca tgtacatata tctcacaaag atctgacct cctcattgtg cgcataaaat atgagagaaa gactttttc aatatctagt acaaaaccag ctttctcac | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt ccgttcgct aaagagaatc tttctgggtt acaagaaaaa ctcccctcac aaaggcactg ggagagtgga ctagatgact tagcattatg cctttctgtg ttatgtttcg tgacgtgttg | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 1080 1140 1200 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg ctggcactgc tcattttctt cccacgatga tcagggcatt agtgagccac gacttggacc ttaatcgcca gtaaacttgg ccaaataaac gttctcagcc gaaagaggga ccttttttct | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agactgtag ccaccctct ctttctcca tgtgaaaaac ttgtgagtgc tgcccactt agggacacca aagattcttc tcacaggcct atgcagtctc aagacataaa aaagagtccc ttacaaaatc | aattetteet agtgtggaaa cagetatett tgateatgga gaceaaggeg tacatacatg atgaagatta eteagecaca tttttttt tteeettaaa taceagaetg ettaagatea cagagggtaa teagggeett tgatetgaea ggtetggea agtgtgetet aaetaggaet egageeegga tgetttgata | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa cttctaattc ttctgagtac tttttgtct aactaacaag gagccaaaag ggtttctca ttttgaatt gttctttgcg cgcatgtatg cagagcacat tcttgtgctg cttaggacct | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc tgtactcaca tgtacatata tctcacaaag atctgacct cctcattgtg cgcataaaat atgagagaaa gactttttc aatatctagt acaaaaccag ctttctcac ctctggacta | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt ccgttcgcct aaagagaatc ttctgggtt acaagaaaaa ctcccctcac aaaggcactg ggagagtgga ctagatgact tagcattatg cctttctgtg ttatgtttcg tgacgtgttg atttctctctc | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 1140 1200 1260 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg ctggcactgc tcattttctt cccacgatga tcagggcatt agtgagccac gacttggacc ttaatcgcca gtaaacttgg ccaaataaac gttctcagcc gaaagaggga ccttttttct ctagacact | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agacttgtag ccaccctct ctttcttcca tgtgaaaaac ttgtgagtgc tgcccactt agggacacca aagattcttc tcacaggcct atgcagtctc aagacataaa aaagagtccc ttacaaaatc cagcacagct | aattetteet agtgtggaaa cagetatett tgateatgga gaceaaggeg tacatacatg atgaagatta eteagecaca tttttttt tteeettaaa taceagaetg ettaagatea cagagggtaa teagggeett tgatetgaea ggtetggea agtgtgetet aaetaggaet egageeegga tgetttgata attgatatgt | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa cttctaattc ttctgagtac tttttgtct aactaacaag gagtttctca ttttgaaatt gttctttgcg cgcatgtatg cagagcacat tcttgtgctg cttaggacct tagagcagt | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc tgtactcaca tgtacatata tctcacaaag atctgacct cctcattgtg cgcataaaat atgagagaaa gactttttc aatatctagt acaaaaccag ctttctcac ctctggacta atcctgacta atccttaata | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta acattgttt ccgttcgcct aaagagaatc ttctgggtt acaagaaaaa ctcccctcac aaaggcactg ggagagtgga ctagatgact tagcattatg cctttctgtg ttatgtttcg tgacgtgttg atttctctctc ttcattctaa | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1140 1200 1260 1320 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg ctggcactgc tcattttctt cccacgatga tcagggcatt agtgagccac gacttggacc ttaatcgcca gtaaacttgg ccaaataaac gttctcagcc gaaagaggga ccttttttct ctagacagct atgagttaac | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agacttgtag ccaccctct ctttcttcca tgtgaaaaac ttgtgagtgc tgcccactt agggacacca aagattcttc tcacaggcct atgcagtctc aagacataaa aaagagtccc ttacaaaatc cagcacagct gacttaactt | aattetteet agtgtggaaa cagetatett tgateatgga gaceaaggeg tacatacatg atgaagatta eteageeaca tttttttt tteeetaaa taceagaetg ettaagatea cagagggtaa teagggeett tgatetgaea ggttetggea agtgtgetet aactaggaet egageeegga tgetttgata attgatatgt gaaattggge | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa cttctaattc ttctgagtac tttttgtct aactaacaag ggttttctca ttttgaaatt gttctttgcg cgcatgtatg cagagcacat tcttgtgtg cttaggacct tagaggcagt ctaaggagtg | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc tgtactcaca tgtacatata tctcacaaag atctgacct cctcattgtg cgcataaaat atgagagaaa gactttttc aatatctagt acaaaaccag cttttctcac ctctggacta atccttaata agaactacaa | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt ccgttcgcct aaagagaatc ttctgggtt acaagaaaaa ctcccctcac aaaggcactg ggagagtgga ctagatgact tagcattatg cctttctgtg ttatgtttcg tgacgtgttg atttctctc ttcattctaa aaatacaaaa | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1140 1200 1260 1320 1380 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg ctggcactgc tcattttctt cccacgatga tcagggcatt agtgagccac gacttggacc ttaatcgcca gtaaacttgg ccaaataaac gttctcagcc gaaagaggga ccttttttct ctagacagct atgagttaac tgcttgtcca | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agacttgtag ccaccctct ctttctcca tgtgaaaaac ttgtgagtgc tgcccactt agggacacca aagattcttc tcacaggcct atgcagtctc aagacataaa aaagagtccc ttacaaaatc cagcacagct gacttaactt ggactcagcc | aattetteet agtgtggaaa cagetatett tgateatgga gaceaaggeg tacatacatg atgaagatta eteageeaca tttttttt tteeetaaa taceagaetg ettaagatea cagagggtaa teagggeett tgatetgaea ggttetggea agtgtgetet aactaggaet cagageetgea tegaeegga tgetttgata attgatatgt gaaattggge atgtaeaect | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa cttctaattc ttctgagtac tttttgtct aactaacaag ggttttctca ttttgaaatt gttctttgcg cgcatgtatg cagagcacat tcttgtgctg cttaggacct tagaggcagt ctaaggagtg tgagcagcgc | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc tgtactcaca tgtacatata tctcacaaag atctgacct cctcattgtg cgcataaaat atgagagaaa gactttttc aatatctagt acaaaaccag cttttctcac ctctggacta atccttaata agaactacaa cggcaggagg | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt ccgttcgcct aaagagaatc ttctgggtt acaagaaaaa ctcccctcac aaaggcactg ggagagtgga ctagatgact tagcattatg cctttctgtg ttatgtttcg tgacgtgttg atttctctc ttcattctaa aaatacaaaa cacggaagga | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1140 1200 1320 1380 1440 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg ctggcactgc tcattttctt cccacgatga tcagggcatt agtgagccac gacttggacc ttaatcgcca gtaaacttgg ccaaataaac gttctcagcc gaaagaggga ccttttttct ctagacagct atgagttaac tgcttgtcca actgtgcca | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agacttgtag ccaccctct ctttcttcca tgtgaaaaac ttgtgagtgc tgcccactt agggacacca aagattcttc tcacaggcct atgcagtctc aagacataaa aaagagtccc ttacaaaatc cagcacagct gacttaactt ggactcagcc gttctcctca | aattetteet agtgtggaaa cagetatett tgateatgga gaceaaggeg tacatacatg atgaagatta eteagecaca tttttttt tteeettaaa taceagaetg ettaagatea cagaggeat tgatetgaea agtgteet aaetaggaet cagagecet tgatetgea agtgteet aaetaggaet egageeegga tgetttgata attgatatgt gaaattggge atgtaeaeet etgteatggt | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa cttctaattc ttctgagtac tttttgtct aactaacaag ggttttctca ttttgaaatt gtctttggc cgcatgtatg cagagcacat tcttgtgtg ctagagcact tagaggcagt ctaaggcagt gtgagcagcgc gccaccagtg | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc tgtactcaca tgtacatata tctcacaaag atctgacct cctcattgtg cgcataaaat atgagagaaa gactttttc aatatctagt acaaaaccag ctttctcac ctctggacta atccttaata agaactacaa cggcaggagg tctgatgaag | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt ccgttcgcct aaagagaatc tttctgggtt acaagaaaaa ctcccctcac aaaggcactg ggagagtgga ctagatgact tagcattatg cctttctgtg ttatgtttcg ttatgtttcg ttatgtttcg tgacgtgttg atttctcttc ttcattctaa aaatacaaaa cacggaagga ggcagagtga | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1140 1200 1320 1380 1440 1500 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg ctggcactgc tcattttctt cccacgatga tcagggcatt agtgagccac gacttggacc ttaatcgcca gtaaacttgg ccaaataaac gttctcagcc gaaagaggga ccttttttct ctagacagct atgagttaac tcatgtgtcca | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agacttgtag ccaccctct ctttcttcca tgtgaaaaac ttgtgagtgc tgcccactt agggacacca aagattcttc tcacaggcct atgcagtctc aagacataaa aaagagtccc ttacaaaatc cagcacagct gacttaactt ggactcagcc gttctcctca aggcagtaac aggcagtaac | aattetteet agtgtggaaa cagetatett tgateatgga gaceaaggeg tacatacatg atgaagatta eteagecaca tttttttt tteeettaaa taceagaetg ettaagatea cagagggtaa teagggeett tgatetgaea agtgtetega agtgtetet aactaggaet egageeega tgetttgata attgatatgt gaaattggge atgtaeacet etgteatggt tgaetteaca | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa cttctaattc ttctgagtac tttttgct aactaacaag ggttttctca ttttgaaatt gtctttggct cagagcacat tcttgtgtg cagagcacat tcttgtgctg cttaggacct tagaggcagt ctaaggagtg tgagcagcgc gccaccagtg cagtccctgg | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc tgtactcaca tgtacacaaag atctgaccct cctcattgtg cgcataaaat atgagagaaa gactttttc aatatctagt acaaaaccag ctttctcac ctctggacta atccttaata agaactacaa cggcaggagg tctgatgaag catttagtca | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt ccgttcgcct aaagagaatc tttctgggtt acaagaaaaa ctcccctcac aaaggcactg ggagagtgga ctagatgact tagcattatg cctttctgtg ttatgtttcg ttatgtttcg ttatgtttcg tgacgtgttg atttctcttc ttcattctaa aaatacaaaa cacggaagga ggcagagtga tctgtgattg | 120 180 240 300 360 420 480 540 600 720 780 900 960 1020 1140 1200 1320 1380 1440 1500 1560 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg ctggcactgc tcattttctt cccacgatga tcagggcatt agtgagccac gacttggacc ttaatcgcca gtaaacttgg ccaaataaac gttctcagcc gaaagaggga ccttttttct ctagacagct atgagttaac tgcttgtcca actgtgcca ctgttgtcca | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agacttgtag ccaccctct ctttcttcca tgtgaaaaac ttgtgagtgc tgcccactt agggacacca aagattcttc tcacaggcct atgcagtctc aagacataaa aaagagtccc ttacaaaatc cagcacagct gacttaactt ggactcagcc gttctcctca aggcagtaac ctggactgtg | aattetteet agtgtggaaa cagetatett tgateatgga gaceaaggeg tacatacatg atgaagatta etcagecaca tttttttt tteeettaaa taceagaetg ettaagatea cagagggtaa teagggeett tgatetgaea ggttetgea agtgtetet aactaggaet cagageete cagaeeegga tgetttgata attgatatgt gaaattgge atgtaeaeet etgteatggt tgaetteaea cagageeec | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa cttctaattc ttctgagtac tttttgtct aactaacaag ggttttctca ttttgaaatt gtctttggctg cagagcacat tcttgtgctg cttaggacct tagaggcagt ctaaggagtg tgagcagcgc gccaccagtg tgccaccgag | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc tgtactcaca tgtacatata tctcacaaag atctgacct cctcattgtg cgcataaaat atgagagaaa gactttttc aatatctagt acaaaaccag cttttctcac ctctggacta atccttaata agaactacaa cggcaggagg tctgatgaag catttagtca atctgcatc | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt ccgttcgcct aaagagaatc tttctgggtt acaagaaaaa ctcccctcac aaaggcactg ggagagtgga ctagattgact tagcattatg cctttctgtg ttatgtttcg ttatgtttcg tgacgtgttg atttctctc ttcattctaa aaatacaaaa cacggaagga ggcagagtga tctgtgattg cgactgccta | 120 180 240 300 360 420 480 540 600 720 780 900 960 1020 1140 1200 1320 1380 1440 1560 1620 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg ctggcactgc tcattttctt cccacgatga tcagggcatt agtgagccac gacttggacc ttaatcgcca gtaaacttgg ccaaataaac gttctcagcc gaaagaggga ccttttttct ctagacagct atgagttaac tgcttgtcca actgtgctcc cccagactgc tttatcact tgaacgggtg | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agacttgtag ccaccctct ctttcttcca tgtgaaaaac ttgtgagtgc tgcccactt agggacacca aagattcttc tcacaggcct atgcagtctc aagacataaa aaagagtccc ttacaaaatc cagcacagct gacttaactt ggactcagcc gttctcctca aggcagtaac ctggactgtg tgggggccgg | aattetteet agtgtggaaa cagetatett tgateatgga gaceaaggeg tacatacatg atgaagatta etteetttttt tteeettaaa taceagaetg ettaagatea cagaggeat tgatetgaea agtgtetgaea agtgtetet aactaggaet cagageete aactaggaet cagageete egageeega tgetttgata attgatatgt gaaattgge atgtaeaeet etgteatggt tgaetteaea eaggeete etggeteteaeae eggeetggett | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa cttctaattc ttctgagtac tttttgtct aactaacaag ggttttcca ttttgaaatt gtctttggctg cagagcacat tcttgtgctg cttaggacct tagaggcagt ctaaggagtg tgagcagcgc gccaccagtg tgccaccgag gctgaagtct | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc tgtactcaca tgtacatata tctcacaaag atctgacct cctcattgtg cgcataaaat atgagagaaa gactttttc actattagt acaaaaccag cttttctcac ctctggacta atccttaata agaactacaa cggcaggagg tctgatgaag catttagtca atctgcattc tcaacttgca | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt ccgttcgcct aaagagaatc tttctgggtt acaagaaaaa ctccctcac aaaggcactg ggagagtgga ctagattgact tagcattatg cctttctgtg ttatgtttcg ttatgtttcg tgacgtgttg atttctctc ttcattctaa aaatacaaaa cacggaagga ggcagagtga tctgtgattg cgactgccta ctcggagctc | 120 180 240 300 360 420 480 540 600 720 780 900 960 1020 1140 1200 1320 1380 1440 1560 1620 1680 |
| ggcacgagcc atgcaaacta ctgctcgcca atgagataga cctcgtctgc tcagcgtaga cgagctgttt ctgttcattg acattccagg ctggcactgc tcattttctt cccacgatga tcagggcatt agtgagccac gacttggacc ttaatcgcca gtaaacttgg ccaaataaac gttctcagcc gaaagaggga ccttttttct ctagacagct atgagttaac tgcttgtcca actgtgctcc cccagactgc tttatcact tgaacgggtg | aagaaagtga gctgtgtctc attatttcct ggcgtggact ccgaattcaa ctgaaccatg agagatgaca agacttgtag ccaccctct ctttcttcca tgtgaaaaac ttgtgagtgc tgcccactt agggacacca aagattcttc tcacaggcct atgcagtctc aagacataaa aaagagtccc ttacaaaatc cagcacagct gacttaactt ggactcagcc gttctcctca aggcagtaac ctggactgtg | aattetteet agtgtggaaa cagetatett tgateatgga gaceaaggeg tacatacatg atgaagatta etteetttttt tteeettaaa taceagaetg ettaagatea cagaggeat tgatetgaea agtgtetgaea agtgtetet aactaggaet cagageete aactaggaet cagageete egageeega tgetttgata attgatatgt gaaattgge atgtaeaeet etgteatggt tgaetteaea eaggeete etggeteteaeae eggeetggett | gaaatggcat acagctgctg tggatgactt ctggtgcctt tgctacctga ttctgaaact gatgaaattg cacgcagtaa cttctaattc ttctgagtac tttttgtct aactaacaag ggttttcca ttttgaaatt gtctttggctg cagagcacat tcttgtgctg cttaggacct tagaggcagt ctaaggagtg tgagcagcgc gccaccagtg tgccaccgag gctgaagtct | ctcagttccc tgctgaaatg tggagagaag tgcattcaga gctgacagct ttctcatcat gaaataaacc tgacctgtgc tgtactcaca tgtacatata tctcacaaag atctgacct cctcattgtg cgcataaaat atgagagaaa gactttttc actattagt acaaaaccag cttttctcac ctctggacta atccttaata agaactacaa cggcaggagg tctgatgaag catttagtca atctgcattc tcaacttgca | agaagcgata gaatcgagaa actcctctct aggagagctg ttttgaaagc tttatgagta aacattgttt ccgttcgcct aaagagaatc tttctgggtt acaagaaaaa ctccctcac aaaggcactg ggagagtgga ctagattgact tagcattatg cctttctgtg ttatgtttcg ttatgtttcg tgacgtgttg atttctctc ttcattctaa aaatacaaaa cacggaagga ggcagagtga tctgtgattg cgactgccta ctcggagctc | 120 180 240 300 360 420 480 540 600 720 780 900 960 1020 1140 1200 1320 1380 1440 1560 1620 |

```
cctgggaatt tttcccattt ttatgaaggg gttttaaatt gtttcatttt gtgtgctgtg
                                                                   1860
cttcaaagcc ttaactgtca aatcttgcat tatcttgttt gtacagaaat atactggcct
                                                                   1920
1980
                                                                   1982
aa
<210> 1318
<211> 2689
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (2316)
<223> n equals a,t,g, or c
<400> 1318
                                                                      60
aaaatgtcac tagttccgaa gctgagaaat agttacatat gtgtcatttc tcactgagtg
                                                                     120
ctctcaagag ttttgtcttt aattctctga aatttggatt tgatattcta gacatggatt
                                                                     180
tcattgcatt tattctattt gggtttcatt catcttcttg aatgtgtagg tttacatctt
                                                                     240
ttgccaaagt tgggtagttt taaggccttc tttcttcaaa tatatttta gctctgctcc
                                                                     300
ttttctgttt ctgggactct gatatgaatg ttggatcttt tgttattatc cctatggccc
                                                                     360
atgggcttcc attcttttt tcccccaatt ggattgtatg tctggtctag aatggataat
                                                                     420
ttctattgat gaatgttcaa gtttattatt tcctctgcca tctccattct gttattgagc
                                                                     480
caatccagta atttttaaaa atttacttgt tgaatttttc atctccattt ttttctattt
                                                                     540
ggttctttgt tatatcttct atttctttac ttagtgcccc ctcctttaat ttgatttaag
agtgtttgca attgcttggt gcattttaat gataggtctc ttaaactcat tgtcagtgaa
                                                                     600
                                                                     660
ttattaatgg caaaaactga aattactttt gcaccaacca aatacagtat cagtgtaatc
                                                                     720
ttggtgttgg tatctgttct ctttttctat taggtttaga tttgcctggt tttggtataa
                                                                     780
tgaatatttt taattgtatc cttgatattt tgagtattag gttatgaggc ccaggtttct
                                                                     840
attcattttg tgtttaactt tttaagaaac tgccacactg tttcccaaaa gtaattgtac
cattttaatt tccaccagca gtatgagctt cacctgcttc ttatcttcac taacacttgc
                                                                     900
                                                                     960
tatacttagc tttttaagtg ctagccatta tattaggcac atagtgttaa cttattgtgt
tttaatttgc atttcacttg tgactaatca tatgtttatt tgacatctgt atatcttctt
                                                                    1020
tgggttgttg aattttaagg tctttttata ttcaagtctt tgtcagatat atataagatt
                                                                    1080
agaaaatatt ttctcccagt ctgtggctaa tcttttcctt ctcttcccca aagtccggtt
                                                                    1140
aagagcaaaa gcttttcaat tttgatgact aattaattta tttgttaagg acttgcagtt
                                                                    1200
tcagtaacat atataagaaa tttttgccta ctccaaggtt ctgaaagttt tatagtttta
                                                                    1260
agcatatgat acatttttag ttaacttttt ttttttttaa gacagaatct cactctgtca
                                                                    1320
cccaggctgg agtgcagtgg cgcgacctct gctcactgca acctctgcct tccaggttca
                                                                    1380
agagattete etgeetegge etcecaagta geggggaeta caagettgea ecaceatgte
                                                                    1440
cagctaattt ttctttttt gtattttcag tagagatgaa gtttcaccat gttggccagg
                                                                    1500
ctggtcacaa accagccagc ctcagctgat ctgccagcct cagcccccca aaatgctgga
                                                                    1560
attacaggtg tgtaccacca ttcccagcat ttagttaacg ttttttgtag gtgctttgag
                                                                    1620
ctataaatca atgtaaattt ttaaacatat atataacaag ttcttctagc attgtttgtt
                                                                    1680
aaaaagatta cctcttcttt aataaatttc ctttgcacca ctgtcacaaa tcagttgtcc
                                                                    1740
atgtatgtgt gtttctcaac tctctatttt attccatgaa taccacacag tcttgattac
                                                                    1800
tgtagcttta taataagtct taaattcagg taacatatgt tctccaactt tttcttttt
                                                                    1860
tttttgagtc ggagtctccc tctgtcatcc agactagagt gcaatggcgt gatctcggct
                                                                    1920
cacttcaacc tccgactccc aggttcaagc aattctccct gcctcagctt cccaagtagc
                                                                    1980
tggaatttca ggtgcctgcc agcagacctg gctatttttg tatttttag tagagatggg
                                                                    2040
ttttgccatg ttggctggtc ttgaactcct gacctcaggt gatctgtcca ccgcagccta
                                                                    2100
                                                                    2160
ccaaagtgct gggattacag gcatgagcca tcgcgcccag cctattttcc aactttcaga
attattttta aaagttggtt tcactaatct aggtcctttg catgtccata tgtattttag
                                                                    2220
aattgagttc ccaatttgta caaaacaaaa agcctcctga atattcaaaa tgggatttca
                                                                    2280
                                                                    2340
ctgaaggcct aggtcaggtt ggaaagaatt gacatnatta aatggtattg agtcttgtag
tctctgaaca tagtatatct ctatttaggt cttttttaaa gttctcccag aagtgttttt
                                                                    2400
                                                                    2460
aatttttata ctatacatct tgcacttctt ttgccagatg catcactatg tatttcatat
                                                                    2520
tgtttatggt gttataaatg gcatttaagg ttttaaggtt cagattgttc atggctagtt
                                                                    2580
catgcaaaat catctgcttt atatatattg atctttattt tgccagtctc actaagctca
                                                                    2640
tttagttcta atagtgttgt agataccttc agatttttt tatatagaca atcatataat
                                                                    2689
ctqttaataa agatgatttt acttcctttc caaaaaaaaa aaaaaaaaa
```

| <210> 1319 | | | | | | |
|---------------|------------|--------------|--------------|--------------|------------|------|
| <211> 1573 | | | | | | |
| <211> 1373 | | | | | | |
| | caniene | | | | | |
| <213> Homo | Saprens | | | | | |
| .400- 1310 | | | | | | |
| <400> 1319 | | ~++a++aaaa | agagggatgg | atamacacaa | сааддаааса | 60 |
| tcacggctgc | ggaagacgag | gttcttcggg | acacccgcgg | costaccata | cadggdddc | 120 |
| ccaggccaac | cacagctggg | gataaaatag | Cacaaccaca | | cagegeeeee | 180 |
| cagcctgtgc | cccttcctag | taccaccagc | aaccatcaat | eeegteteet | cetgeetee | 240 |
| ctcctgcaat | ccaccccgcc | amgamtatcg | ccatggcagc | cytgatcgca | gagaacttcc | 300 |
| acttectate | acttttcttc | aagagcaagg | atgtgatgat | tttcaacggc | ctggtggcac | |
| taggcacagt | gggcagccag | gagetgttet | ctgtggtggc | cttccactgc | ссскдутсдс | 360 |
| caacccaaaa | vtacctgtam | gggctggcgg | ccatcggcgt | gcccgccctg | gtgetettea | 420 |
| tcattggcat | catcctcaac | aaccacacct | ggaacctcgt | ggccgagtgc | cagcaccgga | 480 |
| ggaccaagaa | ctaytcsacc | ggccccaacc | ttcctccttc | taagctccat | cctgggacgt | 540 |
| acaactataa | cccctatcac | ctagtctgtc | atctccctgc | tgcgtggtga | ggcttatgtc | 600 |
| tatactata | gtgagttcgt | ggacccttcc | tcactcacgg | ccagggaaga | gcacttccca | 660 |
| tgaggggggg | ccactgaaat | cctggccagg | ttcccctqca | aggagaaccc | tgacaacctg | 720 |
| teageceaeg | aggaggagt | cagccgcagt | caggtatgag | tcccaqctct | ttggatggct | 780 |
| ccagaccccc | ataataacca | tcctggtgtt | cctgaccaag | tgcctcaagc | attactgctc | 840 |
| geteategge | taccaccaca | aggcctactg | ggcgcagtac | cgcgccaatg | aggaccagct | 900 |
| accactcage | Lacegecagg | tgcactctcg | ggtgcagtact | accaacaata | tacaccactt | 960 |
| gttccagcgc | acggccgagg | acaaggatga | taaggaagta | attoccaact | teccagtaga | 1020 |
| ctttggcttt | gtggcgctca | acaaggatga | cotaggaaccg | atctacttat | accutgagaa | 1080 |
| aggcacgcag | ccacggccac | agtggaatgc | caccaccygc | geceactege | caddcaacdd | 1140 |
| ccagggcctc | ccactctaca | gccgcctgca | caagtgggcc | taagggcccgg | attaccatac | 1200 |
| cgcggcccct | gacaacgtgg | agatggccct | geteeeetee | taaggaggtg | cccccatge | 1260 |
| tctttgtaaa | tggcactrct | tggtcccaaa | ctgaacccca | ctgcttgctc | acatecatat | 1320 |
| cagaagggga | tttttaaaaa | actgttatct | tcttggccag | gggaaaggac | cacaaggcaa | |
| tctggggtgt | ggacagaccc | agtagacaat | ggaagcccca | gccagcaggg | ccaggtgaca | 1380 |
| gtgaaggtga | ccagtgggct | cctttatggt | actctatgca | gttaacatgt | atctagctgc | 1440 |
| atagggacac | ccaqcqcagc | agtgcaccac | tgggaagtgg | cctccagtgc | asctctggcc | 1500 |
| ttattttata | tatttaaatt | tttgataaag | tttttcttac | taaaaggaca | aaaaaaaaa | 1560 |
| aaaaaaaact | | | | | | 1573 |
| | J | | | | | |
| <210> 1320 | | | | | | |
| <211> 1986 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| \Z15> 1101110 | Dapiona | | | | | |
| <400> 1320 | | | | | | |
| caacacaaac | ggagatacaa | ctcgtcaacg | aatcaaattc | agtgatgaca | gagtatgcaa | 60 |
| ggcacgage | ctcaactatt | gtcctcatga | tatactttat | ggaactagaa | tggatcttgg | 120 |
| gagccacccc | aaaatccata | acctggcttt | aagagcggat | tatgaaattg | catccaaaga | 180 |
| agaatgttt | ttatttaaa | ttgatgccat | ggatcatctg | cagtcattca | ttgcagattg | 240 |
| acaagattt | nananagtaa | ccaagaaaag | attagcagaa | actcaagaag | agattagtgc | 300 |
| tgategtaga | acagaagtgg | aacgtgttca | tracttaaat | gaagaaattg | gtaaattgtt | 360 |
| tgaagtagca | gcaaaggcag | aacgtgttta | gagetadae | gaagaaaccg | aagtaatgga | 420 |
| agccaaggtg | gaacaactag | gagergaayy | gaatgtggag | gaaccccaga | aagtaatgga | 480 |
| tgaagtagag | aaagcacggg | caaagaaaag | agaagcagag | gaagtttatt | ggaattctat | 540 |
| gccagcttcc | agttttcagc | agcagaaact | tegagtetgt | . gaagtetget | tagaaataaa | 600 |
| aggacttcat | gataatgaca | gacgactggc | tgatcatttt | gggggtaaac | tgcacctggg | 660 |
| atttattgaa | ataagagaga | agcttgaaga | attaaagaga | gregragery | agaagcagga | 720 |
| gaaaagaaac | caggaacggc | tgaaacgaag | agaagagaga | ı gagagagaag | aaagggagaa | 720 |
| gctgaggagg | tcccgatcac | acagcaagaa | tccaaaaaga | tccaggtcca | gagagcatcg | |
| cagacatega | tctcqctcca | tgtcacgtga | acgcaagagg | , agaactcgat | ccaaatctcg | 840 |
| ggagaaacgc | catcgccaca | ggtcccgctc | cagcagccgt | : agccgcagcc | gtagccacca | 900 |
| gagaagtcgg | cacagttcta | gagataggag | cagagaacga | ı tccaagagga | gatcctcaaa | 960 |
| agaaagatto | agagaccaag | acttagcatc | : atgtgacaga | ı gacaggagtt | caagagacag | 1020 |
| atcacctcgt | gacagagato | : ggaaagataa | gaagcggtcc | : tatgagagtg | ctaatggcag | 1080 |
| atcagaagag | aggaggagct | ctgaagagcg | cgaagcaggg | , gagatetaac | tagctgtgta | 1140 |
| catttcttca | gtccttaagc | ttcctacgga | gttacgtact | attgtttagt | tcacagctgt | 1200 |
| | | | | | | |

<213> Homo sapiens

```
tcagggtgac agtgagcaga tccagacacc agatctagct aggctagatg tacagtatct
                                                                  1260
aacttgatct gaactgaacc tgttttcctt gatgatgcct aaaactacat ccatagtttc
                                                                  1320
tggtgaacct gtaatacagt tctgaaagta cagttttata taataagatg ctgatctctt
                                                                  1380
tattctttca agtaagagtg ctagtgaaca aattgtgtta cttgccttgg gattttttga
                                                                  1440
acgtttgtaa aatgctgtct tcctagtcca aacagctgca gctttgggca tttttctttt
                                                                  1500
                                                                  1560
taattattet teetetgaet ttgtateeet taataeetae aeteteeaat tgtaagagaa
                                                                  1620
agggggcagg gaagcaatat agcttccatt ctaaggctgt attcgtgtta tgaattacta
                                                                  1680
gctgattaca gttcagagca ttgatcctgg aatgtgtgct ggagaaattt aaaatactgg
                                                                  1740
ggttttttgt ttatggtgcc tatttagagt tggaagttga acagctgttg cattacatac
                                                                  1800
ttttgctttt ttattgaaat tttgaaatca aacgtcttga attttctgtt ctgttgaatt
                                                                  1860
gctatgttca ggatgttcta gggggtgggg gcagggactc ttttcgtaat aagcacttgt
tttattttgt gtgtgtggag tataaaggct acacccttat tgtaaaaaaa taataataat
                                                                  1920
                                                                  1980
1986
aaaaaa
<210> 1321
<211> 1993
<212> DNA
<213> Homo sapiens
<400> 1321
                                                                    60
ggcacgagct tctttagaag cattcctgcg taaatactgc tgtaatactg tcatgcaaag
                                                                   120
tgtatccttt cttgtcgtat cctttttggg gcagtgtttt tttgtttttt tcctagaaat
gtttgtcctt cccccacctg ttgatccagg ttaaggaata cttttttaca ctttattcaa
                                                                   180
atgaaatatt tctaaaatat ttgtatagac tgaacagatc ttttatgtgt ttttagattt
                                                                   240
gttgttgaat tttctgtgct gtcctttata taattttttg agggaaagtt agtgaatcag
                                                                   300
gtcaacttac ttagagaatg tgttcattta ctttaaccca gaatacagtc ttgtttcttc
                                                                   360
tatttgtatg tttcctaaac ctaattcaat aacatatgct ttctgttgtg taatatatct
                                                                    420
ggtttaggta tttataatgt gtttaaaatt tgggcaaagg aaatgttttt cttttaaaaa
                                                                    480
                                                                    540
gtacttacat tgaaaattaa gatgtctgga ttactatgta aattctagag agtagcagac
ctctcatctg aagtcttagt gaatctcttt tgacatagat agcaatagaa gtatctttct
                                                                    600
                                                                    660
tctttcccct ttcttttct aaacaagaga agaaaagcgt aatagagggg agaacacata
                                                                    720
atgcccacta agggtagtgc attaaggaaa aacagtcttg gcaggtatat aggaatagtg
                                                                    780
gtttccagac tggttgatga ccgtaatcac caagaacagt ggttctcagt cttggctgca
                                                                    840
cattgcagtg atctggaact taaatactaa ttttaaaagg gtgcagtggc tcatacctgt
aatcccagca ctttgcaagt ccgagatggg agaatcactt gagcccagga gtttgagacc
                                                                    900
agccggggca atgtagggag accctgtccc tacaaaaaat acaaaaatta gccagtgtgg
                                                                    960
tggcttgcac ctctggtctc agctacttgg gatgctaggc aggagattac ttgagcccca
                                                                   1020
aagttgaggt tgcagtgaac catgatcaca ccactgcatt ctatcctggg tgacagatga
                                                                   1080
gaccctctcc ctcctaaaaa aatccttaag aaatatattg atgcttggtt cctttggtca
                                                                   1140
gaattttgat ttaaggtgtt gggagtgtag cacagatgtt ggaataaacc tctcaaactg
                                                                   1200
                                                                   1260
attttaatat acaaacaagg tcgagaacca ccaaggaaga gtttttatgc ataaagattc
ctgtactcta ccctagaact aatacatctg aatctctggg aatggagtat aacaatcaga
                                                                   1320
                                                                   1380
tttgaaaagg tttctttagt aattttaagg actgaccagt ttagacactg ctttgttaga
                                                                   1440
gtaaaatgat taggtaccta gtatcaacct agccatccaa ccttatatta ataactagga
aaataaaggg ttggagcctc tgtgtttctt tgttgaaaaa tctgctacta ttattagatc
                                                                   1500
tgtgaaaaca attgaaaatt cggttattat caccttaaaa gtacaaaacc tatagatttt
                                                                   1560
                                                                   1620
gaaaatgtaa ttatttttct gtaggcatag ttaaaaagat tttgtaaatg ttataaatca
gtttctttat aagcggttta tttagataaa ttttgttata ctgacatgat tcactaattt
                                                                   1680
                                                                   1740
tctaaatata aatggttcag ctcttagtta tttttaaact aatgacctgt gttatacttc
ctatttttaa tgggctttta tgatgtttta ggtttttttg aatcccgtgt ccttcaagtg
                                                                   1800
ctttctaact ttgagaggaa gaaattgacc acctggacta tggaactgtg cgtaacagct
                                                                   1860
ttgaaagtgt atttaaaaat taaatctata tgcctttaaa tcagtgaatt ggaaacatat
                                                                   1920
1980
                                                                   1993
aaaaaaaaa aaa
<210> 1322
<211> 1469
<212> DNA
```

```
<220>
<221> SITE
<222> (1419)
<223> n equals a,t,g, or c
<400> 1322
ggcacgagct tcggagaagt gaaatataac attactcagt ggacggagaa gtctgttttg
                                                                    60
ttacagagac atgcctctca gaaggtcagg aggttttgag tacctatcct tgccacccat
                                                                   120
acaggaaatc caaagtttgg tgtctctctc tctctctgtc tctttctttc tctttctccc
                                                                   180
cccaaacccc tctcactccc tccctccctc tctccttccc ctatttgcaa tcatattctc
                                                                   240
cctctgcttc ttttctcttc tgccctcctt gtgggcagtc atgaaaatca attcagactg
                                                                   300
tgttcattag cagatttatt attctattga gaaagcactg gaatgttttg tgagattatt
                                                                   360
tttatatgaa ggaatagcct gaactcaaac agatggtaag aatagtacaa acaccttagc
                                                                   420
acatcactgc acacacagta ttctgaaagg agatttgaca cttaattccc attttcttaa
                                                                   480
aataacagtt ttgttgactt aaaaatatga gatacatagg atgtgaaaaa aaatgtttgc
                                                                   540
agtactcagc aaaaaatagg gtacataaag cagggtggct gtccatccac tgattctggg
                                                                   600
                                                                   660
gtgagaagcg atttctacct cgcaagagtg actagaaagt ttctaggagc acctccaggc
                                                                   720
ttgcaaagaa agtgaggcct cttggtatcc tatcctcagt gtgtatatga cagccagtat
aatcaatacc ctaggttatg cgtctatatg atactcatct gtgaatatta ttggttttgt
                                                                   780
                                                                   840
aatctttgtt atataagaag gatgtttagg ctgtatatac tggggtagat tattgcctgc
                                                                   900
cccttataca taggaatatg ctgcataatt gcgcataact tccatctccc ttactggctt
gtaggcagag gaaactgtat atgttactgc cttgtacttt tctcatacac caaaaacaca
                                                                   960
                                                                  1020
ccaaaaaaat caataaaata agcaatcttc tattctcatt ccttttccca cagcagcata
                                                                  1080
ttttagaggc acatacaaaa cctacattct ctagttggga gtggattttt aaagttttcc
ttttatcttt tattttttt ttgtatgatg cactgagatg tgtactttct aacaggggat
                                                                  1140
                                                                  1200
tggtacctaa gaaatgtggt agcattattc agaaaactat tatactttca aatgacacat
                                                                  1260
agtaaggaga atggaataat acatgttgca tatttgttac cagttgtaat ttgtctgtat
                                                                  1320
tatgaaagat gtaatggttt gtcagctgtc actgttgttt tcttgtaaca tgatatggaa
                                                                  1380
1440
1469
aaaaaaaaa aaaaaaaaa aaaaaaaaa
<210> 1323
<211> 1254
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (441)
<223> n equals a,t,g, or c
<400> 1323
gaattcggca cgaggttcct gagctgtgca accaatcaga gtccagtgga gaagatttct
                                                                     60
tectgaagte caggetecaa gaacaagatg tetggagaag atccaettet ttetataeee
                                                                    120
                                                                    180
acatgtgcaa cccctgggtc tccctgttgg gggctgttgg gtcccttctc atcatgtttg
tgatacagtg ggtgtatacc ctggttaaca tgggtgttgc tgccatcgtg tatttctaca
                                                                    240
                                                                    300
ttggccgggc cagtccaggg cttcaccttg gatcagcctc caacttcagc tttttccggt
ggatgargtc tctcttgcty ccctcctgca ggagcttgca gtccccccag gagcagatca
                                                                    360
tcttggcgcc gtccctggct aaggttgaca tggagatgac tcagctcamc caggagaatg
                                                                    420
cagacttcgc cactcgggat ngctaccamc actyctccct cgtgaaccgg gagcagctga
                                                                    480
tgcctcacta ctagatgcag tgctgggacc ttcctctttt ggagctgtcc catgtacagt
                                                                    540
ggacccaagc ycaggacctt cgtggagctg cttctccaac ctgagaaact caagacccat
                                                                    600
cckcccgytg tcactttgga caatggamat ctacattttc ttttcccttt tttttttt
                                                                    660
                                                                    720
tgagacagag tctcgccttg tcacccaggc tggagtccag tggcacaatc ttggctcact
                                                                    780
gcaacctctg cttcccgagt tcaagcaatt ctcctgcctc agcctcctga gtagctggga
                                                                    840
ttataggcat gcaccaccac acccagctat tttttgtatt tttactggag acagggtttc
accatgttgg ccaggctggt ctcgaactcc tgacctcgtg atccacccgt ctcagcctcc
                                                                    900
caaagtactg ggattacagg cgtgagccac catgcctggc cagaaatcta tgttttctta
                                                                    960
                                                                   1020
gaacatgtgg aagaaggaaa aagacaaaaa aggaagtctg gattctgagg accacgtctc
acccagggtg acatcaggaa tggtgctagc ctctgcaaca cgacacccag tctgaagagc
                                                                   1080
```

| tctatacagg tactaagact gcagagggcc acaataagtg | agcaggggac tatgttttat | accaagactc attttattgt | tgcacaacca attatttatt | gattgcttgt caaaaataaa | 1140 1200 |
|--|-----------------------------|--------------------------|-----------------------------|--------------------------|--------------|
| taatacactc acatgtttcc | acacccaaaa | aaaaaaaaa | aaaaaaaac | tcga | 1254 |
| | | | | | |
| <210> 1324 | | | | | |
| <211> 1827 | | | | | |
| <212> DNA | | | | | |
| <213> Homo sapiens | | | | | |
| <400> 1324 | | | | | |
| ggcacgaggg aaactggtat | taggaaaaaa | aggatgataa | tcaataagca | aatgattaaa | 60 |
| gragaactat taaccttaca | taaggttatt | gtaaatatgt | aaagaaaaga | gaattttgaa | 120 |
| grttaaattt agtagtagca | atagacctgc | aatgtaaagt | ctaataatta | ttgtagaaaa | 180 |
| ataattctct gaggtttttc | tttctccaga | tataattttt | ttatcatctt | atatcctgtt | 240 300 |
| ggagttgctg gtgaacttct | tacaatatac | gctgccttgc | cgtatgtgca | agaaaacagg | 360 |
| aatgttttca ataagacttc | ctaacaaata | tttgggggg | totaatttto | aataagttac | 420 |
| cttataacca tggcatcata gtcaaaggaa gaaaggtgct | tatacctttg | gtggattgta | gaaaaggatg | attaaatgat | 480 |
| ctctgcaaac aaggtgcttt | ttccaggaga | accaagatta | cctgagtcca | agttttaata | 540 |
| acaagaataa acaactttgt | gaaatatcat | ggattgtatg | gtttcttaaa | atataacttg | 600 |
| agacacgtgg tatttgccag | tatttgtgtt | cctcttgtgc | cagatctatt | ttttacaaga | 660 |
| actgtgcaaa tatcagtaac | ttttgggtag | gtattgatta | ttaggaaaat | aattaggtgt | 720 |
| attatctqqq qqaaaaaaaa | acttttgcta | agttttttt | gaaacatgct | caaagctttt | 780 840 |
| taaatcaata tttagaaatt | agtttaacga | tttactatta | tacctgctag | tgatatttat | 900 |
| gtgatattta taaatgaaaa atttttgaac ccacaatcta | taaatgcaaa | attataacaa | gcattatgac | taataacagt | 960 |
| gtttggaagc gtggatataa | tttactaaa | taagactttt | gatgtagata | aagtagcagc | 1020 |
| ataaaaacac acaaatattc | aagtagatgt | cacagttgga | aaatattctt | tggaaatatt | 1080 |
| tctaggcagc tgaaattact | tatactgcta | aggaaatctg | ctttttattt | aaattagcca | 1140 |
| cttaaggaca aggttttcaa | ctgtgaaggt | tttaaggggt | taggaagagc | ataagtattt | 1200 |
| gcccactat taaaaaaaaa | aacatgacat | ctgactataa | tgttgtattc | aggctgggag | 1260 |
| tagtagetea tgeetgtaat | cccagcactt | tggaagactg | aggcaggagg | atcgtttgag | 1320 1380 |
| cccagaagtt caaggccagt | ctgggcaaca | tagcaagacc | ccatccctaa | adadattaca | 1440 |
| aacaaaaaaa attaaccagg tgaggtggga ggatcacttg | catggtgaca | ttgaaggtta | caatgageta | tgatggtacc | 1500 |
| actgtactta agcctgggtg | ageeeaggaa | accetatete | tgaaaaatag | tgatgatgat | 1560 |
| gatgatgatg ataacgatga | taagagaagat | gatcatgctg | tactcagaac | tttggttgag | 1620 |
| agagtettet etatactgta | gaattatctt | gtaacaattg | ttatgataat | ccctttgtgg | 1680 |
| tacttaggta actaaacatt | ttggggtatg | atctttggac | agactccttt | cattctgaat | 1740 |
| tccattgaat agcaaaaggt | : cttgtaataa | agttcctgtc | cttgtgttta | ataaaaaaaa | 1800 |
| tacaccagaa aaaaaaaaa | aaaaaaa | | | | 1827 |
| 010 1205 | | | | | |
| <210> 1325 <211> 1514 | | | | | |
| <211> 1314 <212> DNA | | | | | |
| <213> Homo sapiens | | | | | |
| | | | | | |
| <400> 1325 | | | | | 60 |
| aattcggcac gagcactgct | ctgcctcagt | ggacagtcgt | tetattete | tatcagges | 120 |
| ttttgttttc atgccttccc aatgtctgac ccgaaagaga | cttgaagtca | actcatocto | cattattage | cagccctct | 180 |
| gtgttctgtg tgatttgttt | algialliac - tatttttcct | ttttttaca | tatatatgca | gggaagtaat | 240 |
| ggtactggta gtgtatgttt | tctatgtggt | tcaaatatga | atttcgaaca | caccaagccg | 300 |
| ctaatgagat agcagctttt | ttctgggacc | cagagtcaca | accaaattga | tttaagaccg | 360 |
| gacccaagac acctttaaca | a ataggactga | aaggaaaaag | gatagggaaa | a aagcttatta | 420 |
| aagaaatgtg tcaacaccaa | a atgtagaggg | gaagaaccac | : aaccaggcat | : aataccaaac | 480 540 |
| cggttccagg gggaaacaag | g gctttggtat | teegetgget | ccagcgcttt | etctgaaacc | 540 600 |
| cgaggctggc cagggtgctg | g tcaccgtgtg | gtetttgatt | . geageeatte · aanatattt | ctttccctcc | 660 |
| tgcttttcct tcttgtttca aaagcctttt gtctccttg | a yaacaycaca F goototttt | atcettagga | . aagatatta | gtgcttgtga | 720 |
| aaagaatcat gaatgcaaca | a agggaggcto | gteetgtta | tgtcgccgat | taagttttaa | 780 |
| addgaacodc gaacgcado | . 555555 | | | | |

```
840
acttttattt attatttatg tctgccgtat tttaaataaa cattctcgtt ccttccagtt
ccagtcatag tgtgtctgtg gcattccagt ccaaccatgt gacttattta ttctaatttg
                                                                     900
                                                                     960
agggctgcac tgtacaccat ggtgtcctgt gacaccgtgt tccagacatt tatggaagga
                                                                    1020
aaacatccca tataaatgaa actgtcatgc tgtgtcctcc ccggcagcag aagatgtgtc
cttccattga gtgagggtaa ccttatgtcc accaaggata ctttgagaaa gcccctaagg
                                                                    1080
                                                                    1140
aacaagcctc agtcccacgg tttcagacta tttattctct gaacacaaga gtattggtta
attatgttct cagctctccc tgctgttgta tgtgtgcatt cactgcaagt aacttatatc
                                                                    1200
tttttatttg aatgtatttt aaagcagtag atagaataac aaaggaatat gaaaaccatg
                                                                    1260
gactgaatgg accattttat gtattcagag agagaagcca ctcatcattg ccagaaatac
                                                                    1320
                                                                    1380
catgtaaaaa ttggcagttc agaggttgca atacttagta tagtaaataa ataaacggtc
                                                                    1440
aacattgtgc aaccactacc aaaaagtgtg ttgtaatgca tcaaaaatca acacaatttt
1500
                                                                    1514
aaaactcgag gggg
<210> 1326
<211> 1535
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (574)
<223> n equals a,t,g, or c
<400> 1326
                                                                      60
qqcacaggca aaattgcctt caaaggctaa gtctcttgta ttctgccctt actgagagtc
tqtactctcc taaggttaat tggcttatca tattctgctt ttgtgctccc tagtttacca
                                                                     120
tgatgettgg ggtttttgee eetaegettt teaetttgte tteetgtaat ttattacaae
                                                                     180
caaccettgt gttttttttt ttttaacagt tttggatetg cattaatttt ttagteeca
                                                                     240
gaggaacact atgttcccaa acattatgtt ctgcactctc atgctcatat cactttgtgt
                                                                     300
agtgccagac acctcctggg atctcaagaa atgttgtttc tttttaaaaag atgggtgatt
                                                                     360
actctaggag gctcataaaa gatctttctc agttgagtta ctttcactgt ttatgtatcc
                                                                     420
                                                                     480
caagtggctt aggtcaaaat attggttaat agaaagactc caagtctttg gagaagcttt
actagtgtct cctcatctct gtaaaagcaa agatgagtat tgaatggtct tacaggagtg
                                                                     540
ttggagagaa atgatgaaaa gcattagaaa tganaaggcc tttgttgaaa atatgaaatg
                                                                     600
                                                                     660
ccagagtgaa gacagtatca ttattcccaa gcaggcctca gtgtaagcgg agctctctcc
accaattgaa gctgttcatc actacaaaga atggctgtcc tgcaggatcc tttctgctgc
                                                                     720
tggctcctac tgcagagaat agaaacttct ttctaaatac tgtatccaaa atgtttcctc
                                                                     780
ttctctcaac ttctcagctc tatccaggac acttcactgc tttcctccaa ggcaaacttg
                                                                     840
aaccttcctc taaattcctt ccctgaaggc tgttttgagg cagagggata ggaccatgga
                                                                     900
                                                                     960
cagaggetta geetaceaat caeteacaca geaggaaagt caattetett eetaceagga
                                                                    1020
atccctggga gagggtgttt acatgaatag actcttcttt aactataggt cacttttccc
                                                                    1080
ttstctaamt tcctttggag tgatgctgtg tcttctagaa acactgactc cttccagcaa
                                                                    1140
ctctctgctc cttagacata taagaaatac tcattcttgc aaatgcagtt cttaaaatat
                                                                    1200
ttcaaaacat cttcattata aaatatttca ggcaaacaga aaactatgaa aaatagttta
acaaacatct atgtgtaaaa cagctacctt agctgggcgc agtgctcacg cctgtaatcc
                                                                    1260
                                                                    1320
cagcactttg ggaggccgag gagggtggat cacctgaggt tgggagttcg agaccagcct
                                                                    1380
gaccaacatg gagaaacccc atctctacta aaaatacaaa attggccggg catgatggtg
                                                                    1440
catgcctgta gtcccagcta ctcctgaggc tgaggcagga gaattgctgg aacccgggag
                                                                    1500
gcggaggttg cggtgagccg agatcgcacc attgtactcc agcctgggca acaagagcaa
                                                                    1535
aactccgtct caaaaaaaaa aaaaaaaaac tcgag
<210> 1327
<211> 3051
<212> DNA
<213> Homo sapiens
<400> 1327
ggcacgagct gtctcagcct cccaagtatc tgggattaca ggcatgcacc accatgcctg
                                                                      60
gctaattttg tatttttagt agagacgggg tttcttcatg ttggtcaggc tggtatcaaa
                                                                     120
                                                                     180
ctcccaacct caggtgatcc gcctgccttg gcctccaaag tgttgggatt ataggcgtga
```

| gcactgcgcc | cgctatccac | atccttctag | agtcagaatg | gtagggtccg | ttgacttcag | 240 |
|-------------------------|------------|------------|--------------------------|------------|------------|--------------|
| | | | tcctctgccc | | | 300 |
| | | | tctttcccag | | | 360 |
| | | | ctttaattgc | | | 420 |
| | | | caccaaagaa | | | 480 |
| | | | | | tgtccctcgg | 540 |
| | | | cagagccagc | | | 600 |
| acagcctcaa | tagggagaaa | agacaaaggc | ctcaaaatga | caggcagcct | gacagaggaa | 660 |
| | | | tggaattcct | | | 720 |
| cttagagtga | taatatgggt | ggtagccagt | ggccaaacag | caagaactaa | gagtggccct | 780 |
| tgcaaaaaaa | ggttgggaaa | gctgggccca | tattgcctgt | aaacccttga | gcctgatgct | 840 |
| catacagctg | tcccttgttt | tagccaggtc | ttgacagaag | ggttaccagc | actgtcactg | 900 |
| ctctacagaa | tgctctcccc | gtgcctctct | gttgatttat | aacagttggg | taaccagata | 960 |
| gcaatatagt | ggcaattgag | tagccatata | gtaatacagg | ggcagttggt | taaacatata | 1020 |
| gcaatatcac | ataatgatat | gtttaattta | acctcagttt | tttaaaccag | aatgcttcta | 1080 |
| | | | tccatcaagg | | | 1140 |
| tattgtcaaa | atggttggga | tgggatagtt | acaaaggaca | cttttgtatg | ttgtatggga | 1200 |
| | | | atgaaaagat | | | 1260 |
| gaaactgatc | agagatgtca | ctggtcttta | agtgatgtct | tgaaaatcca | gtatgtattt | 1320 |
| gcccaaaagt | tttagcctac | atctagctag | cttacactta | gcagccaaac | catcattgtg | 1380 |
| taggttetgt | tttggaggaa | gctcatgggg | gatctgtgta | tttcttaggt | ttctccctgt | 1440 |
| teteeaatgt | tttatccatt | tegtagettt | tttactgtct | ccagaaagta | gtgtgggacc | 1500 |
| tgeacttagg | ggaataccag | aatcatageg | tggttctgcc | ttettgatga | gtgattgtga | 1560 |
| | | | gtgyattttt | | | 1620 |
| | | | acatggcttg | | | 1680 |
| | | | tctgatcatt | | | 1740 |
| | | | agagtatgca | | | 1800 |
| | | | cgccctcttt aaacaggaaa | | | 1860 |
| catttagtca | cgaacactga | antogatcae | aattctattc | tagataaaat | gaaygayggt | 1920 |
| | | | atagagcaag | | | 1980 2040 |
| | | | gggtctgcaa | | | 2100 |
| | | | agcttgcacc | | | 2160 |
| tcctgctgca | gaagttaggt | aacataagac | ttagatttct | tcctattcta | gcaatctgca | 2220 |
| agaccaccag | gcttaacttt | ttagctgcca | gaagacaaac | ccccttttct | gtttcggcaa | 2280 |
| tttgtcctgg | cacqtqtttt | ggacttcctc | cgatttacac | gaaaagctct | gatattcatt | 2340 |
| | | | tttcttttct | | | 2400 |
| ggtcaacaaa | aaaaaattga | ggtttttctt | gtttctatct | agttcatgct | ttctttacaa | 2460 |
| tgtttgaaca | gtagtctgtt | aacttagtag | gtggtacctg | gaaaggtatt | ttaaqtataq | 2520 |
| tgactgttta | ataaatactt | aattggatga | tggaggagga | gaaattgttt | tcttcccagg | 2580 |
| | | | atatattta | | | 2640 |
| cagatcctgc | caggatattt | ttgtaaaaaa | ggaaaatgga | agattccaat | aaactagaaa | 2700 |
| cagtacgtat | ctaagatgct | gacacagaag | ctaatgtgac | ttttcagctt | atcaagagga | 2760 |
| | | | tgttttctca | | | 2820 |
| cactgagtct | cattcaacca | agtaatctaa | aatactgtgc | aaattctagc | agtatgtctt | 2880 |
| | | | gtacaaaaaa | | | 2940 |
| tatgtataac | acaaattaat | tttacacaga | gaaagatgtt | tctaggcaag | tgaaattctg | 3000 |
| gtaattcata | ctatttcttt | gtatgaacaa | ataaaatata | ttttgccaac | g | 3051 |
| .010. 1200 | | | | | | |
| <210> 1328 | | | | | | |
| <211> 1290 <212> DNA | | | | | | |
| | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1328 | | | | | | |
| gaaaaacgag | agatgaaatt | tagttaagtc | tatgtgagca | agtgagagaa | ggttaggtaa | 60 |
| ggggagagga | tggaatgctt | gcctccaatq | aactttggag | cttgtatata | agtcagattg | 120 |
| ctcccctatt | gctattatct | attactcttg | agagctggct | gtcctttgaa | agaaagaagt | 180 |
| aatgttcttt | gaaagaaaga | aaaatctctt | gctgtgtcaa | acctcaaaat | gttgctattg | 240 |
| gggttagaag | gcctcctctt | tatgcttttt | aatgctcttt | caaacgtgtt | cttttagacc | 300 |
| agttttctaa | taagctttgt | aaaatgtact | atccaaatta | gaagcggatt | tggaaatgca | 360 |
| | | | | | | |

```
aactaacgtg cacttagata tccaagtggg tgagcttagc cactcttacc catgctcttt
                                                                     420
                                                                     480
ccctggaatc cctggagacc tgtccaagat gatttccata taccagcata gaaaatcaga
                                                                     540
atcaagagca aactctgaga ctggcacaat ccaagaagat ttcctggctc tggcttttag
taatttggga ctccaactgc cactgtactg gactgtaatt tataaatcca gtagctacgc
                                                                     600
                                                                     660
agggtggagg ctgggctgag gattaccata atgaaatgta ctaaatcttc atttaggtat
                                                                     720
gcaattgtga agtgaaggca tctgctttct ttacagtatc agagtccaag aacaggatgt
caccatagat aaaagcctca tacaaaggca gaactacact ccaaatttaa tgtgtttaaa
                                                                     780
ttggtggggc accagcagaa aatacttcta gctcagcttt actcttcttc cacactaggc
                                                                     840
tgggcccagc aatacaggag aggatgaagg gaggagctcc aggaggcgag ggaagagccc
                                                                     900
tagcagggcg gccatcacaa ccactcactg agagttgccc ttcttaaaaa tgtattttat
                                                                     960
tttagccagt gggtcccttc ctttctcctt tcctctctac tgctcaagaa cagatttgag
                                                                    1020
gccaggtgcg gtgcctcaca tctgtaatcc caacactttg ggaggctgag atgggtggat
                                                                    1080
                                                                    1140
tgcttgagcc caggagttca agaccagcct gggcaacaca gcgagacccc atctcttaaa
aaataacaga cttgaggaac ccctctccct tccataattc ccctcatcca ccgcccactc
                                                                    1200
caggcactca ctcaaacttg ctcttcaact ctgtatacaa gcagaagcaa taaaccaatc
                                                                    1260
                                                                    1290
tgattttctt ttcaaaaaaa aaaaaaaaaa
<210> 1329
<211> 1503
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1061)
<223> n equals a,t,g, or c
<400> 1329
                                                                      60
gtaattcggc acgagttaca atcccaggat ggtgcaaatt ctgaagagag gttgcaagat
                                                                     120
acatgagcaa cttaagcaga gaaacagttt tactaatatc tagatgtgct atgattgtct
                                                                     180
qaaatqqcac aqaaagaaag cctagagaag taaacaaagc aaacaaaata aaaattacaa
                                                                     240
tcaatqaaaa qqatcttagg ttttaattct ccaagttgtg tactggagag tagccgcact
                                                                     300
gagggatag aatgttctcc taatttgatt atataatcac tcttgtccat tactactact
                                                                     360
tttccttcct tctcacttga aaaatctgac actgctctaa tttcatgctt tccctgaata
ggcaccaact gcccataaat ttttagtcaa ttacacagaa acctttgact cttgggggct
                                                                     420
gtatttgtga tggtatttgc ttaagagttt tatttctaag gtagttattt atctaagtct
                                                                     480
                                                                     540
tgattcttat aatattataa tcattaattc cctttktttt aggstcaaca tctctaccca
cattatcatg tttcttgatc acaactaggt tacaagggtt ggagatacac aaagatgaat
                                                                     600
gccatactat ttatgcttat aaaaaagcaa tttatctttt gttctactac agaaaatcct
                                                                     660
                                                                     720
tcctcaaaaa caaattcatg aagtcagcct tgctcaaaca ccttcagtgg ctctttattt
ctggacataa atctaaattc ctttgtcaac attttgagat cttcaataac ctggtttcag
                                                                     780
tcttccaatt taatcttaaa tatgttctac tgaatgaacc aagtgcttaa acaattttta
                                                                     840
ttatgtgggt gctttgaaaa tgttgccaga atcatttaaa aggttctggg agaatatctc
                                                                     900
acctgaagga aatggctctg ctgatgcaag cagcacattt tctggcttta aatcacagtg
                                                                     960
cacaatattc ttaaaatgca gattccycaa gcaacaagta tctgttatga aaaagattty
                                                                    1020
cttttcatgt ctggaaatca cagtaaacct cctgtgactc ntgaatgatt taatttgaaa
                                                                    1080
actccactat agttcatcaa gacttagcta aaagtgtgtt attctgctcc ttaaggttaa
                                                                    1140
caattcccac aatcacccaa catgtaaarg tactgctatt taattatttt agtttttagc
                                                                    1200
                                                                    1260
kggatacagt ggctcatgcc tgtaatccca gcactttggg agacctaggc aggtggatca
                                                                    1320
cttgaggcaa ggagttcgag accagcctgg ccaacacggt gaaaccccag ctctactaaa
aatacaaaaa ttagccaggc gtggtggcac acatctgcaa tcctagatac ttgggaggct
                                                                    1380
                                                                    1440
gaggcatgag aatcacttga atccaggagg cagaggttgc agtgagccag attgcaccac
                                                                    1500
1503
cga
<210> 1330
<211> 2289
<212> DNA
<213> Homo sapiens
<400> 1330
```

| cacgcgtccg | cggacgcgtg | ggcaacaaca | accaatatca | gtaaagcttt | ggaagacctc | 60 |
|-------------|------------|------------|--------------|------------------------------|--------------------------|--------------|
| tgctacctat | ttaaaataat | caacactcag | ccagaagagg | taatgtaatg | ctgtagatgg | 120 |
| gaataggagc | attgatcttg | ctcttcttcc | tgactgtagt | acttcctttc | tatggcttta | 180 |
| accagccacc | tcctcctggg | aaacatctcc | tgtgggcttg | ttgggtatag | aagctactct | 240 |
| aagacccaac | cagataccat | gatgccactg | ttaattctgt | ttgctcttct | aattaaccta | 300 |
| agctagtgtg | tatgtggaca | gggaggtgga | caaaattcta | cagtaaatat | ttcaaaaatt | 360 |
| atagcatcat | agaatcatct | ttatggctgc | cagatttgtc | atcaacaccc | ccaggataga | 420 |
| cagtttcatc | ttccgaccta | tctggaaaat | ctcaggacca | tgtccccaga | cctcctaact | 480 |
| aaccatagca | ccccaaaata | cccaaacccc | tattgtgaag | tggaactctt | cccacttag | 540 |
| tggatccccc | ctggaccctg | ctgtcccct | gccctgacca | ctattatcgg | aatctgggaa | 600 660 |
| gttgggcatc | tatatctcca | gtgcactcat | aactctaaca | tttgcatcca | tagaagttta | 720 |
| aatgacacaa | aagtggaagc | ttccctgcga | tgctctggtc | caactctagt | tatagtaget | 780 |
| caagaccacg | gggaggtaat | gagattecat | cigigagiga | aaagaccata | racagtacta | 840 |
| tctcccggat | gggaacataa | aggaaaaaca | accycccyac | ctgggaaggt agaacaggtg | gacagtacta | 900 |
| ccttcttcta | gaaaacaaag | tanatatan | caccaccacg | ccaggcttct | cttaataccc | 960 |
| ctatagaccc | aacctggcaa | tgaagtataa | aataggaaga | agtcacaccc | tataccacte | 1020 |
| tagttgggtt | catttttgtt | tattattaa | aacgggaaga | cccttgtatc | taaaacttgg | 1080 |
| caacteccta | aggagteace | ggggagtgtt | accetteea | gggtcacaat | ctataacgcc | 1140 |
| taggaggaa | gaatatcaga | aataantaan | caataaaact | aattctggca | ggaatcaggg | 1200 |
| taggacccaa | actaccaga | ccctagaata | actttaccta | ccatgagtta | acgctaaaga | 1260 |
| acttaactca | actagtagea | tccttagcca | ccaacggaga | tcaggcatta | aagagaatca | 1320 |
| acceggeeea | agactctgga | aaatgtagtt | gcgataacag | actaccattg | gattattaac | 1380 |
| tagetgaaca | aggaggggtc | ttggcagtta | ttaataaaac | tgctgcacat | atattaactc | 1440 |
| tagacagatt | gaggttaaca | ttcaaaagat | ctatgagcaa | gctacctagt | tacatagata | 1500 |
| taaccagggc | actocccca | actatatctg | gtcaaccatc | aaaagtgcct | tcccaagtct | 1560 |
| cacctgtttt | tcacctcttc | taggaccttt | gacaactgtc | ttgttacaaa | tgtttggtcc | 1620 |
| ttgcttcttt | aacctcttag | taaagtttgt | gtattctaga | ttaccacagt | tccagagaca | 1680 |
| atgctggcac | aaggcttcca | gcccatcctg | tccactgaca | cggagaatga | aatcgtcctg | 1740 |
| cctctgggct | ccttagatca | ggtatccaga | gatttttact | cctccagtgc | caggcagggc | 1800 |
| ctacgtccat | aaactcagca | ggaagtagtt | acggaaaaca | gatctccgcc | cttctgcagc | 1860 |
| ccccttaaga | ttaaggagga | gtatctaatc | tctgaagggg | gaatgaggta | gtaggtgggc | 1920 |
| ctcacctctg | gaagtggggc | tcaggcactc | agaccaactg | agcactacct | aaataggtcc | 1980 2040 |
| agggcagatg | ctagttccat | aggacacacc | gacctgtgtc | aagtcagttc | ccatggetet | 2100 |
| ggcagcaccc | agaagttacc | acceteacce | tggaaatgtc | tgcataaact | tagtagtata | 2160 |
| ttgcatataa | ttaaaagtgg | atacaaatac | cacttcagaa | ctgcctctga | actactatac | 2220 |
| ggcgcacaac | etgtagggea | geeetgettt | gcaaggagca | gcgctctgct aaaaaaaaaa | aaaaaaaaaa | 2280 |
| | gerreaaraa | aagttyctaa | CCCCaaaaaa | aaaaaaaaaaa | aaaaaaaaaa | 2289 |
| aaaaaaaaa | | | | | | |
| <210> 1331 | | | | | | |
| <211> 2929 | | | | | | |
| <212> DNA | | | | | • | |
| <213> Homo | sapiens | | | | | |
| | _ | | | | | |
| <400> 1331 | | | | | | |
| ccacgcgtcc | gatgaacttc | tggggaaccc | tgtgctgatc | tgccaggaag | atggaacttg | 60 |
| gaatggcagt | gcaccatcct | gcatttcaat | tgaatgtgac | ttgcctactg | ctcctgaaaa | 120 |
| tggctttttg | cgttttacag | agactagcat | gggaagtgct | gtgcagtata | gctgtaaacc | 180 |
| tggacacatt | ctagcaggct | ctgacttaag | gctttgtcta | gagaatagaa | agtggagtgg | 240 |
| tgcctcccca | cgctgtgaag | ccatttcatg | caaaaagcca | aatccagtca | tgaatggatc | 300 360 |
| catcaaagga | agcaactaca | catacctgag | cacgttgtac | tatgagtgtg | accccggata | 420 |
| tgtgctgaat | ggcactgaga | ggagaacatg | ccaggatgac | tcacccate | atgaggatga | 480 |
| gcccatttgc | attcctgtgg | actycaytic | tastsasat | tocastosso | gccaggtgag | 540 |
| aggagacgag | Lacacattcc | aaaaayayat | castocasco | taaattaaa | ggttcttgct | 600 |
| tgagggagcc | aggagtcggg | ccaccccccc | acaactggaagt | . cygaycygay : aataaaataa | ccactcccga cggaaggcct | 660 |
| agagetatage | ttcatcaecc | aantaanatt | ccactatcat | gaggggggg | tcttgcacgg | 720 |
| tactaceee | ctcacctata | adytadtatt | caactggcat | gcagagattc | ctctctgtaa | 780 |
| accagtcaac | tataaacctc | ctgaagatct | tgcccatggt | ttccctaatg | gtttttcctt | 840 |
| tattcataga | ggccatatac | agtatcagtq | ctttcctggt | tataagctcc | atggaaattc | 900 |
| | | _ 5 5 | | | | |

| atcaagaagg | tgcctctcca | atggctcctg | gagtggcagc | tcaccttcct | gcctgccttg | 960 |
|------------|------------|------------|-------------|------------|-------------|------|
| cagatgttcc | acaccagtaa | ttgaatatgg | aactgtcaat | gggacagatt | ttgactgtgg | 1020 |
| aaagggagg | cggattcagt | gcttcaaagg | cttcaagctc | ctaggacttt | ctgaaatcac | 1080 |
| ctatasaacc | gatggccagt | ggagctctgg | gttccccac | totoaacaca | cttcttataa | 1140 |
| ttctcttcca | atgataccaa | atgcgttcat | cagtgagacc | agctcttgga | aggaaaatgt | 1200 |
| gataacttac | agctgcaggt | ctgggtttat | catacaaggc | agttcagatc | tgatttgtac | 1260 |
| | gtatggagcc | | | | | 1320 |
| agagaaaggg | gccaatgcag | tagasactaa | agecegegag | acctatosas | ataaataaa | 1380 |
| account | ctggaaggtt | cygcaaccyg | tagaggcacac | gatagaatga | cctatcagaa | 1440 |
| | | | | | | 1500 |
| agatggtcgc | tggttccctg | agagaatete | acathtasat | atanatage | angtttgtgt | 1560 |
| aaacataaca | catatacttg | tacatgggga | cgatttcagt | grgaaragge | aagtttettgt | 1620 |
| | gaagggtata | | | | | 1680 |
| aacctgggag | ccaccattct | ccgatgaatc | ttgcagtcca | gtgtettgtg | ggaaacctga | 1740 |
| aagtccagaa | catggatttg | tggttggaag | taaatacacc | tttgaaagca | Caattattta | |
| tcagtgtgag | cctggctatg | aactagaggg | gaacagggaa | cgtgtctgcc | aggagaacag | 1800 |
| acagtggagt | ggaggggtgg | caatatgcaa | agagaccagg | tgtgaaactc | cacttgaatt | 1860 |
| tctcaatggg | aaagctgaca | ttgaaaacag | gacgactgga | cccaacgtgg | tatattcctg | 1920 |
| | tacagtcttg | | | | | 1980 |
| gagccaccca | gtccctctct | gcaaaccaaa | tccatgccct | gttccttttg | tgattcccga | 2040 |
| gaatgctctg | ctgtctgaaa | aggagtttta | tgttgatcag | aatgtgtcca | tcaaatgtag | 2100 |
| ggaaggtttt | ctgctgcagg | gccacggcat | cattacctgc | aaccccgacg | agacgtggac | 2160 |
| | gccaaatgtg | | | | | 2220 |
| aattgctcga | ggcgtacatt | atcaatatgg | agacatgatc | acctactcat | gttacagtgg | 2280 |
| atacatgttg | gagggtttcc | tgaggagtgt | ttgtttagaa | aatggaacat | ggacatcacc | 2340 |
| tcctatttgc | agagctgtct | gtcgatttcc | atgtcagaat | gggggcatct | gccaacgccc | 2400 |
| aaatgcttgt | tcctgtccag | agggctggat | ggggcgcctc | tgtgaagaac | caatctgcat | 2460 |
| tcttccctgt | ctgaacggag | gtcgctgtgt | ggccccttac | cagtgtgact | gcccgcctgg | 2520 |
| ctggacgggg | tctcgctgtc | atacagctgt | ttgccagtct | ccctgcttaa | atggtggaaa | 2580 |
| atgtgtaaga | ccaaaccgat | gtcactgtct | ttcttcttgg | acgggacata | actgttccag | 2640 |
| gaaaaggagg | actgggtttt | aaccactgca | cgaccatctg | gctctcccaa | aagcaggatc | 2700 |
| atctctcctc | ggtagtgcct | gggcatcctg | gaacttatgc | aaagaaagtc | caacatggtg | 2760 |
| ctgggtcttg | tttagtaaac | ttgttacttg | gggttacttt | ttttattttg | tgatatattt | 2820 |
| tgttattcct | tgtgacatac | tttcttacat | gtttccattt | ttaaatatgc | ctgtattttc | 2880 |
| tatataaaaa | ttatattaaa | tagatgctgc | tctaccctca | aaaaaaaa | | 2929 |
| | | | | | | |
| <210> 1332 | | | | | | |
| <211> 1203 | | | | | | |
| <212> DNA | | , | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1332 | | | | | | |
| ccacgcgtcc | gcgcaatcac | tgatttgaaa | agttcccaac | acaggcagct | gctgtgtata | 60 |
| tgggattaga | gccactacat | agaatagtct | cttacagatt | ttcataaata | ctagtcacaa | 120 |
| taagggtatt | tttcttgggg | gtggagtaag | ggggagactg | atgctagtcc | ttgttgtatt | 180 |
| ttgttgggct | gtccttgtgt | attttcaccc | cagcctgtag | tcctcctcac | ttcaacccca | 240 |
| gggattttg | gggagcaagg | gtagccaatg | gcagaggggg | ttggggctgg | gactctggag | 300 |
| actectece | ttctttctct | teetteegee | tccccgtgc | ccccagctgc | tcttgtcact | 360 |
| gtctctgatg | ggtatttgcc | tggctttgtt | gcttctctat | ctgtatttag | ctgcagtgat | 420 |
| cctttagctg | gttggctcag | aaaaaaaaa | atgtgcttta | ggtgccctgt | aatcctgggc | 480 |
| atcaagggaa | tccatccttc | ccctttttga | tatgttctcc | ccgtacttcc | agatttattg | 540 |
| ttatggctcc | cagtgggtat | tggcgattct | tgtgatgcag | ggcctcagtc | agtgtccagc | 600 |
| catgcataag | ggagaggata | gtgtgtacct | gccctgccct | ctgctatgaa | ggtctctgcc | 660 |
| | tgggactccc | | | | | 720 |
| aatgtcctat | ttgggagggc | aggaagcaaa | ggaactggac | agggattggt | gggcttggga | 780 |
| | tatcttggat | | | | | 840 |
| | ctgcttccaa | | | | | 900 |
| | ggtctgtggg | | | | | 960 |
| | cctctccttg | | | | | 1020 |
| | cctaatcttg | | | | | 1080 |
| tatatotoac | tgtatataaa | tgaagttttt | ttgtttttt | tgttttcctt | tttggtgcaa | 1140 |
| taaaatttat | tttggcagaa | aaaaaaaaaa | aaaaaaaaaa | aaaaaaaaaa | aaaaaaaaaa | 1200 |
| 200090 | | | | | | |

| aaa | | | | | | 1203 |
|--------------------------|--------------------------|------------|-------------|------------|--------------------------|--------------|
| -210- 1222 | | | | | | |
| <210> 1333 <211> 3186 | | | | | | |
| <211> 3100 <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | - | | | | | |
| <400> 1333 | | | | | | 60 |
| ccacgcgtcc | gcccacgcgt | ccgcccacgc | gtccgcgctg | cgcgagggct | ccggagctga | 60 120 |
| ctcgccgagg | caggaaatcc | ctccggtcgc | gacgcccggc | ceeggeregg | cgcccgcgtg | 180 |
| ggatggtgca | gcgctcgccg cgctgcccgt | ccgggcccga | cacacacatac | tagetegee | taaccaatac | 240 |
| tetactege | ccctgcgagg | cccaagagat | gagettatgg | aaccaaggaa | gagetgatga | 300 |
| agttgtcagt | gcctctgttc | ggagtgggg | cctctqqatc | ccagtgaaga | gcttcgactc | 360 |
| caaqaatcat | ccagaagtgc | tgaatattcg | actacaacgg | gaaagcaaag | aactgatcat | 420 |
| aaatctggaa | agaaatgaag | gtctcattgc | cagcagtttc | acggaaaccc | actatctgca | 480 |
| agacggtact | gatgtctccc | tcgctcgaaa | ttacacgggt | cactgttact | accatggaca | 540 |
| tgtacgggga | tattctgatt | cagcagtcag | tctcagcacg | tgttctggtc | tcaggggact | 600 |
| tattgtgttt | gaaaatgaaa | gctatgtctt | agaaccaatg | aaaagtgcaa | ccaacagata | 660 720 |
| caactcttcc | cagcgaagaa | gctgaaaagc | gtccggggat | catgiggate | acatcacaac | 780 |
| acaccaaacc | tcgctgcaaa agaccctcaa | gaatgtgttt | tatatagaaa | tagtastat | ggcaagaaag | 840 |
| catadaayay | agaggcaagg | aaaagatctg | gaaaaagtta | agcagcgatt | aatagagatt | 900 |
| gctaatcacg | ttgacaagtt | ttacagacca | ctgaacattc | ggatcgtgtt | ggtaggcgtg | 960 |
| gaagtgtgga | atgacatgga | caaatgctct | gtaagtcagg | acccattcac | cagcctccat | 1020 |
| gaatttctgg | actggaggaa | gatgaagctt | ctacctcgca | aatcccatga | caatgcgcag | 1080 |
| cttgtcagtg | gggtttattt | ccaagggacc | accatcggca | tggccccaat | catgagcatg | 1140 |
| tgcacggcag | accagtctgg | gggaattgtc | atggaccatt | cagacaatcc | ccttggtgca | 1200 |
| gccgtgaccc | tggcacatga | gctgggccac | aatttcggga | tgaatcatga | cacactggac | 1260 |
| aggggctgta | gctgtcaaat | ggcggttgag | aaaggaggct | gcatcatgaa | cgcttccacc | 1320 1380 |
| gggtacccat | ttcccatggt | gttcagcagt | tgcagcagga | aggacttgga | tttcaaaaaa | 1440 |
| gagaaaggaa | tgggggtgtg ggaacagatt | tatagaagaa | ggaggaag | ataactataa | granceagag | 1500 |
| cagaagigig | atcgctgctg | caatgccacc | acctgtaccc | tgaagccgga | cactatatac | 1560 |
| gaacgtacga | tgtgctgtga | agactgccag | ctgaagcctg | caggaacagc | gtgcagggac | 1620 |
| ttcagcaact | tcctgtgacc | tcccagagtt | cttgcacagg | ggccagccct | cacttgccag | 1680 |
| ccaatgtgta | cctgcacgat | gggcactcat | gtcaggatgt | ggacggctac | tgctacaatg | 1740 |
| gcatctgcca | gactcacgag | cagcagtgtg | tcacgctctg | gggaccaggt | gctaaacctg | 1800 |
| cccctgggat | ctgctttgag | agagtcaatt | ctgcaggtga | tccttatggc | aactgtggca | 1860 |
| aagtctcgaa | gagttccttt | gccaaatgcg | agatgagaga | tgctaaatgt | ggaaaaatcc | 1920 1980 |
| agtgtcaagg | aggtgccagc | cggccagtca | ttggtaccaa | rgccgtttcc | tagtagaacaa | 2040 |
| acatecetet | gcagcaagga ggacccaggg | ggccggatte | caggeegggg | gacccacgtg | ggaaaaatct | 2100 |
| acgacatgcc | tcaatgtcaa | aatattagtg | tetttagggt | tcacgagtgt | gcaatgcagt | 2160 |
| gccacaacaa | aggggtgtgc | aacaacagga | agaactgcca | ctgcgaggcc | cactgggcac | 2220 |
| ctcccttctq | tgacaagttt | ggctttggag | gaagcacaga | cagcggcccc | atccggcaag | 2280 |
| cagaagcaag | gcaggaagct | gcagagtcca | acagggagcg | cggccagggc | caggagcccg | 2340 |
| tgggatcgca | ggagcatgcg | tctactgcct | cactgacact | catctgagcc | ctcccatgac | 2400 |
| atggagaccg | tgaccagtgc | tgctgcagag | gaggtcacgc | gtccccaagg | cctcctgtga | 2460 |
| ctggcagcat | tgactctgtg | gctttgccat | cgtttccatg | acaacagaca | caacacagtt | 2520 |
| ctcggggctc | aggagggaa | gtccagccta | ccaggcacgt | ctgcagaaac | agtgcaagga | 2580 2640 |
| agggcagcga | cttcctggtt | gagettetge | raaaacatgg | tacaaceaac | gtgctgctcc | 2700 |
| tgagagagta | gcaggttacc | ctgagggtag | acadeageee | adaadaadca | aggaagagga agggttgggc | 2760 |
| ccantataca | ctttccccar | tgacacctca | accttaacaa | ccctgatgac | tggtctctgg | 2820 |
| ctgcaactta | atgctctgat | atggctttta | gcatttatta | tatgaaaata | gcagggtttt | 2880 |
| agtttttaat | ttatcagaga | ccctgccacc | cattccatct | ccatccaagc | aaactgaatg | 2940 |
| gcattgaaac | aaactggaga | agaaggtagg | agaaagggcg | gtgaactctg | gctctttgct | 3000 |
| gtggacatgc | gtgaccagca | gtactcaggt | ttgagggttt | gcagaaagcc | agggaaccca | 3060 |
| cagagtcacc | aacccttcat | ttaacaagta | agaatgttaa | aaagtgaaaa | caatgtaaga | 3120 3180 |
| gcctaactcc | atcccccgtg | gccattactg | cataaaatag | agtgcatttg | aaaaaaaaa | 2100 |

| <pre><210> 1334 <211> 1608 </pre> <pre><212> DNA <213> Homo sapiens</pre> <pre><213> Homo sapiens</pre> <pre><214</pre> <pre><215</pre> | aaaaaa | | | | | | 3186 |
|--|---------------|------------|------------|------------|------------|--------------------------|------|
| <pre><211> DNA <213> Homo sapiens </pre> <pre><400- 1334 ccacegetcc geacecetc cectegece cleagacget acceatgat geoggtttge agagttggcc tgtggaatgg ctcatgtttg tgegtgtgt tgtgtatatt tatgggcatg ggtgcatggc tgtggaatgg ctcatgtttg tgegtgtgt tgtgtatatt tatgggcatg acctcatgag atgcaagaag caggccag gectggcct ttcetceggg ctgtggcac acctcatgag ggtccccaaa atgactgagg cagagace ttcatgttg aatgaagaaa acgactagag ggtgtgcag ctgaagagca cagacecet caggcccaac ccacetgag ggtcgtgcag ctgaagagca catacetece cagcccatcac cacetgtce ctcccccaca catcacetec caggtgggtct tggttaagtg ccagtgagg atgcagga atggtagga aggaggact ttgttgtaggg tttcctgatg ggcaggaga aggtgagag ttcccaaa ggcagaaga aggtgaag ttcctgatg ggcaggaga aggtgtagag tggttgagg aggttgtggg aggtgtgagg aggtgtggg aggttgtggg aggtgtgagg aggtgtgag aggtgtggg aggtgtgag aggtgtgag aggtgtggg aggtgtgag aggtgtgag aggtgtggg aggtgtgag aggtgtgag aggtgtggg aggtggagag aggtgtgag aggtgtggg aggtggaagag aggagagcat cttttgtct tggtaaaa actggggg ccttgagag cactggagag tcagaggc ccatgagag cactggagag aggagagttc caggagagag aggagagttc cacecccac accgcacetac aggagaaga aggagagac tcacetttc caccgcace tggcaacacac aggaagaga aggagagacat tcatacacaa actggggg agaggcact tcatcacaaa actggggg agaggagagagagagagagagagagagagagag</pre> | | | | | | | |
| <212> DNA <213> Homo sapiens <400> 1334 cacacqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqq | | | | | | | |
| <213> Homo sapiens <400- 1334 coacgegtce geaccecte cecteggee cteagacget acceatgat geeggtttge agagttgge tytgataty agagaagat caggecagg gettgate tytgataty agagaagat caggecagg gettgate tytgataty acceatgag gettecaaa atgactgagg cagaaagee tytgaggage tytgagaaactectotgag gettecaaaa atgactgagg cagaaagee tytgaggage tytgagaaactagag gatgaggg tytgataty tytataty tytataty tytataty tytataty tytgataty acceatgag gettgagg tytgataty tytataty tytatataty tytataty tytataty tytataty tytataty tytataty tytataty tytatataty tytataty tytatataty tytataty tytataty tytataty tytataty tytataty tytataty tytat | | | | | | | |
| cacgogate gaacccette cocteggee etcagacget acceaatgat geoggittge 60 agagttgace tyggaatgg ctcatgttg tgegtgtgt tygtatatt tataggeatg 120 gytgcatget tygtgtat ttytacatgt etgtattget gtgtectgt aaatacatge 120 agctcatget gytgcacaa atgaatgag catgogeete ttecteggge etgggagee 240 acctcetgea gyteccaaa atgaatgag cagaaagee ttggggagee tagaaagea 300 agctaaaggg gytggag etgaaggee gttgtettt cagtetgag aatgaagaat 62 cgcatcatee cactgteee etcececca etceagtgg gytttetee agatgatet 480 gyttaagtge ccagtgagg atgatgagg aggatgaggate ttettgega acactgtegt 540 gyttaagtge ccagtgagg atgatgagg aggatgaggaggate ttettgega acactgtegt 540 gyttaagtge ccagtgagg atgatgagg aggatgaggaggate ttettgega acactgtegt 540 gyttaagtge ccagtgagg atgatgagg aggatgaggate ttettgega acactgtegt 540 gyttaagtge ccagtgagg atgatgagg aggatgaggate ttettgega acactgtegg 640 aagctgaact ctttgaagte acagaagcet teetttetge tractetagg gactgaggg 640 aagctgaaca actgaggge cctagtgage cactttgee cactaggg gactgagg 720 tggctcaaac actgggggt cctagtgage cactttegte cactataggg gactgagg 720 tggctcaaac actgggggt cctagtgage teetteett tractget ggcaggagt teetteete 780 gycaaggttt ccacacecac gcccttgga teetteggt taggagagg teetteete 780 gycaaggttt ccacacecac gcccttgga teettegge tyggagagg ctccccaat gyggaagga gyaaggagat gaggagagat aggagagat aggagagat aggagagat gaggatgge gaggatge 69 ttectcacag actgtggg gaggagat teetaggagag aggagagat gaggatgga gyaaggagaga gyaaggagaga gyaaggagaga gagagaga | | sapiens | | | | | |
| ccaegegtcc gcaecectc ccteggecc ctaagacgt acceatagt gccggtttge 60 agagttggcc tyggaatgg ctagttgttg teggtgttgt tyggatatt tatgggcatg 120 agagtcatgct tggtgtat ttgtacatgt ctgtattgt gtgtatatt tatgggcac 240 acctctgca gctcccaaa atgactgaag ccaggcccag gcctggcctc tcctctgge ctgtggcac 240 acctctgca gctccccaaa atgactgaag cagaaagccc tggtggcac tagaaagca 300 agctaaaggg gtgcagggt ctgtctgtc gtgtgtctt cagccccac cgcccctc cggccccag 220 ccactatcc cacctgccc ctccccccc cctccagtgg ggctttctc agatgtgtta 420 aggtgatgg tttcctgatg ggcaggaag aggaggact tctttgtgg ggcttta 420 aggtgaag tggagagg atggagagg aggaggac acacttgctc cagcccctc cggccccag 420 aggtgaag tggagagg atggaggg gaggaggac acacgagag ggttaaggg ggttaaggg gatgcaggg acggacgac cacttggcc cattggcc cacttggcc cctatggccc ggcacgagct ccaccaca ggcccctgag gcccaggag gactgcccc 660 aggacagggag tccaagggag cctgtacatg ccaaggact ggcacgagct tcaccacgag gcccaggag tccaaggagg cccaccact ggccctgaga actcgggg gcacgagct ccaccacac gcccctgca tcctcaggg cccaggag tccaaggagg cccaccact aggacacac aggagagaga aggagagat accaggagag aggagagaga aggacagac actgggga ggagagaggag aggacagag aggacagagag aggacagag aggacagag aggacagag aggacagag aggacagag aggacagag aggacagagag aggacagag aggacagag aggacagagag aggacagag aggacagagagag | 1213: 1101110 | | | | | | |
| agatttggcc tgtggaatgg ctcatgtttg tgggtgtgt tgtgtatatt tatggcatg ggggtggtatgt tgggtatgt ttggtgtgtat ttggaatgt tgggtgtgt tgggtgtatt tatggaatg gggtgggt | | | | | | | |
| ggtgcatgct tggtgtgtat ttgtacatgt ctgtattgct ggtgcatgt aaataatgc ttgttgtatgg atggaaga caaggcccag gcctggctc ttcctcggg ctcggcaa acctcctgca gctcccaaa atgactgagg caagaccca ttcgtgggagc tagaaagca acctactga ggtgtgaggg ctgtgcag ttgtgaagacc actactccc acgcccctc cggcccagc 420 ctgactactc cacctgtcc ctcccccca ctccactgg ggctttctc agatgtctta 480 tggttggggg ttcctgatg ggccaggaga ggagggatc ttcttgca gatgtgttta 480 tggttagggg ttcctgatg ggccaggaga ggagggcatc ttcttctgga gactgtgtt 480 tggttaagtg ccagtgagg ggctggagg gagggact cagaaagcc gctggtggc aagggtgaag tgggtgagg ggcttgagg gagttggcc cattaggct cagaaggag ggctggagg gagggaact ctttttgt ggctaaag ggaggaagt ctcatggac cctttaggt tgggtaaac cctttaggt ggcaggagagaggaaggaaggaaggaa accagggag accagggagaaggaag | ccacgcgtcc | gcaccccctc | ccctcggccc | ctcagacgct | acccaatgat | gccggtttgc | |
| ttgtgtatgg atggaagaag ceaggeceag gectggeete tteeteegge etgtggees 240 acctectgea getececaaa atgactgaag cagaagece ttggggaage tagaaageaa 360 agctaaaggg gattgtgeag etgtgtgtg gtetgtett eagtergag aatgaagaaca cegaeteate eacetgtee etecececa ectecagtgg getttetee agatgtett 480 ggttaagtge ceagtgaag ggeetgage ggetggeet etectggge etgtggge 600 aaggtgaag taggetgagg ggetgtgagg ggetggeet etectggg getttetee agatgtett 480 ggttaagtge ceagtgagg ggetgtgagg ggetggeet etecttegg ggetgeete eagaggaete etetttegg ggetgagg 600 aaggtgaag taggetgagg ggetgtagg ggetggeet ecataggaete etetttetg tegeteaaa eactgggagg 600 aaggtgaag tetlaggte ecataggete teetttetg tegeteaag ggetggagg 720 taggetaaa eactgagget ectatagget tegggtaate taggecagge teeettetg ggacagtte ecaeceaa ecetggga tectagget teetttetg teggteage ggetggagg ggeagagggaggaggaggaggaggaggaggaggaggagga | agagttggcc | tgtggaatgg | ctcatgtttg | tgcgtgtgtg | tgtgtatatt | tatgggcatg | |
| acctectgca getececaaa atgactgaag cagaaagce ttggggage tagaaagcaa agcaaaagg gatgcagggt ctgtetgtet getgtetett cagtetgagage tagaagaata 360 ctgacataaagg gatgcagggat ctgaagagec actacectee cagecectet cagececae ccccataatac cacetgteec ctececaea cetecatgg getttete agatgtetta 480 tggttaagtge cacatgatge tteetgatg gacatgaget ttettgaga gatgaget ttettgaga gatgaget ttettgaga gatgaget ttettgaga gatgaget ttettgaga gatgaget ctggttagg gatgaget ctggttagg gatgaget ttettgaga gactgaged agggttagage atggttage gatgaget ttettgate cacataggg gatgagact ctgaggaget cetatgget tgggtcaaat taggcaagg tecacecat 780 gacaaggag tecagget cetatgaget teggataat taggcaage tecacecat 780 gacaagaga tecagget cetatagget teggataat taggcaage tecacecat 780 gacaagate agggtaagg gaaggagat tecacaggag cacaggatgag cetatgggg gaaggagat tecacaggag cacaggatgag gacaagaca daggagaga tecaceag gacaggaga daggaagat gaggagagat gaggagagat gaggagagat gaggagaga gaggagaga caataatgaa gagaagaat aggagaagat caatacaa caggaagaa aggaagaga aggagagada aggaagaa aggaagaa aggaagaa tecacacettet cacaggaa aggaagaat aggagaagat aggagagat tecacagga gagaagaa aggaagaa aggaagaa tagaagaagaa aggaagaa tagaagaaga aggaagaa aggaagaa tagaagaagaa aggaagaa tagaagaaga aggaagaa aggaagaa aggaagaa tagaagaagaa aggaagaa aggaagaa tagaagaagaa aggaagaa tagaagaaga aggaagaagaagaagaagaagaagaagaag | ggtgcatgct | tggtgtgtat | ttgtacatgt | ctgtattgct | ttactagga | ctatacacac | |
| agctaaaggg gattgtaggg ctgtactgtct gtctgtctt cagtctgagg aatgagaac 360 ctgacctaga ggctgtgcag ctgagagccc actacctcc cagcecctct cggccccagc 420 cgcatcatcc cactgtcgcc ctcccccca ctccagtgg ggctttctc agatgtctta 480 ggttaagtgg ctttcttgag ggcaggaga ggggggat ttcttgaga cactgtgtgg 540 ggttaagtgc ccagtgagg atggtgtggg gagtgcccc cataggaagc gtggtgggc 660 catggaagcc ctttgaagc acagtgtggg cactttagcc caagagagc gtggtgggc 660 catggaaccc ttttgaaga ggctggagc aggtggagac cttcttgtagg gactgcccc 660 catggaaccc ttttgaagac acagcagct tcctttctgt ttcgtcttgg ggctgagag ggcagagagagagagagagagagagagagagaga | ttgtgtatgg | arggaagaag | ecaggeecag | cadaaadccc | ttagagaga | tagaaagcaa | |
| ccgactagag ggctgtgcag ctgagagcc actacctcc cagcccctct cggcccaagc cgcatactac cacctptccc ctcccccca cctccagtg ggctttctc agatgtctta 480 tggttaggtg tttcctgatg ggccaggaga ggagggcatc tctttgcaga cacactgtctg 540 ggttaagtgc ccagtgagg atggttggg gacttggcct cagaggagc gtggtggg 660 aagcgtgaag tgggctgagg ggctctgagc cacttgctc cactcaggg gactgcccc 660 catggaactc ctttgaagtc acagcagcct tcctttctgt ttgctcttgg ggctgagagg 660 ggacagggag tctcagggc cctatggct tgggtcaat tagccagg ggctgagagg 720 tagctcaaa cactggggc cctatggct tgggtcaat taggcagg ggctgagag 720 gacacagctc agggctagc gaaggaagat aggagcagct cagactgggc cccccatcagg 720 gacacagctc agggctagc gaaggagaga aggagagct cagagctggc gaccccag 720 gacacagctc agggctagc gaaggaaga aggagagact 720 tcctcacaga actggtggg gcaggtcctg tccactagtg cagagtgag ggcctggcc 720 tcctcacaga actggtggg gcaggtcctg ttcacagaga 720 tcatacatca cagcaatcac tgggaattt gggggcagg 720 tcatacatca cagcaatcac tgggaattt gggggcagg 720 cactttet ccccgggaat aactggcct ggggaagac acagggtga ggccagccc 720 tcaatataa ggaaaccaa gctgaattg gggaacaca gaccaagga ggccatccc 720 tcaatataa gggaaacaa gctgaatgg 720 cacttttet cccgggaat aactggcct 720 cacactttet cccgggaat aactggcct 720 tgccaagcat cgggaagac aggcaggcct 720 caagcagaa aggaagacca gctgaatgg 720 cacactttet cccgggaat aactggcct 720 tacaagcaga aggaagaga aggaggagat 720 caagcagaa aggaagacaa gctgaatgg 720 cacactttet cccgggaat aactggcct 720 tgccaagcat gaggaacaa aggaggagat 720 caagcagaa aggaaccaa gctgaatgg 720 reactttett tgaagagaag 720 reactacaagagaag 720 reactacaagaagaag 720 reactttett tgaagagaag 720 reactttett tgaagagaag 720 reactttett tgaagagaag 720 reactacacaagagagaag 720 reactttett tgaagaagaag 720 reactttett tgaagaagaag 720 reactttett tgaagaagaag 720 reactttett tgaagagaagaagaagaagaagaagaagaagaagaagaag | acctectiged | geteeccaaa | ctatctatct | atctatcttt | cagtctgagg | aatgagaatc | |
| cgcatcatec eacetytece etecececa eteceatyg ggctttetee agatytetty fygtytgggg ttectyaty ggccagagag ggaggcate ttettycaga eacetytety fydgttaagte ecatygage atgytggg gagetygeet cagagagae getygtggg 600 aagetygaag tyggetyaag ggetytggg gagetygeet catetygg getyagaggg fee catygaact etettety tygetyagagg 720 tygeteaac actegggte ectatyget tegtyetaat taggecagge teceteett gggacaggag tecaggge ectatyget tyggetaat taggecagge teceteett gggacaggag tecagggag tecagget ectatyget tyggetaat taggecagge tygecacea ggecetygea geggecaty eagaggacgt tecacagage geggtety ecagaggagagagagagagagagagagagagagagagaga | ctgacctgag | gactatacaa | ctgagagccc | actacctccc | cagcccctct | cggccccagc | 420 |
| ggttagggg tttcctgatg ggccaggag ggaggcatc ttcttgcgac acactgtctg ggttaagtgc ccagtgaggc atggtgtggg gactgagcct cagtaggagcc gctggtgagg aaggttgaagt gggctgagg ggctctgagc cactttgctc caatcaggagcc cttgatgagg taggtcaaac ctttgaagtc acagcagct tcctttctgt ttgctcttgg ggctgagagg tggacaggaggac tcttgaggtc cctatggctc tgggtcaaact taggccaggc tggacccat ggacaggaggac tctcagggcc cctatggcct tgggtcaaggc ggcctgaggac ggacaggagac tccaccccac gccctggac tcctcagttg ctatgggatg cccctccagg gacacagctc agggctaagc gaaggaagat aggagacgct cagagctgcc aggcttgcc tcgttgagag aggacagctg cagaggagat aggagagac acaggatgaa ggcctgccc tcgttgagag aggacagctg cagaggaga aggaggaga aggaggaga aggaggtaa ggccaccaag ccactttct ccccgggaat aactggccct ggggcaggg caaggatga ggccaccca tgcaagcat ccgggaagac tgggcaggct ggggcaggggag aagaaccaag ggccactcc tgcaagcat ccgggaagac tgggcggct tatcaaccagac aggactgca tgtccaatgt tcaaagcaa aggagagac tgggcggct tatcaacca gggaagtgag gggctgtca tgcaagcat ggagaatctt gggggaaaa acatggacct ggggagaagagagagagggggggggg | cocatcatcc | cacctgtccc | ctcccccca | cctccagtgg | ggctttctcc | agatgtctta | 480 |
| ggttaagtgc ccagtgaggc atggtgtgg gagctgagct | taattagggg | tttcctgatg | ggccaggaga | ggagggcatc | ttcttgcgac | acactgtctg | |
| catggaactc ctttgaagt acagcagcct tectttetgt ttgetettgg ggetgagagg 720 tggeteaaaa acteggggt cetatggete tggeteaate taggecagge tgeaeceat 840 ggeagettte cetagggete cetaggete teggteaate taggecagge tecetect 840 ggeagettte cecacecae gecetggea tecteagtg ctaggecagge tecetectet 840 ggeagettte caggetgag geaggaagat aggaggaget ceagggetgee 200 geaggetggg gagggeaggg eagggetgee 200 ceagggtgggag ggeaggtetge tegggggagggagggggggggg | ggttaagtgc | ccagtgaggc | atggtgtggg | gagctggcct | cagaggagcc | gctggtgggc | |
| tggctcaaac actcggggt cotatggct tgggtcaatc taggccagc tgcacccat 780 ggacagggag tctcagggct cctgatcatc cccaggcct gggctgggc ctccctcctt gggcagctttc ccaccccac gccctggac tcctcatgtt ctatgggatg cctccatgg ggaccagctc agggctaagc gaaggaagat aggagcagct cagaggttgaa ggcctggca 1020 tcggtggag ggcagctgt cagagggtctg ggggcaaggg cagagttgaa ggcctggca 1020 tcggtggag gggcagctgt cagagggtgg gagggcaggg cagagtgaa gggctggca 1020 tcggtggag gggcagctgt cagaggggtg gaggacaggac | aagcgtgaag | tgggctgagg | ggctctgagc | cactttgctc | ccatctaggg | gactgcccc | |
| ggacagggag tetraggget cetgateatg cecaggecet ggeetgggge etceteett ggeagettte ceaceceae geecetggea tecteagte etcteagte etcteagt geaceaggete aggeagatage gacaggagat aggagagat aggagagate eaggagttge geaggaggaggaggaggaggaggaggaggaggaggaggag | catggaactc | ctttgaagtc | acagcagcct | tcctttctgt | ttgctcttgg | ggctgagagg | |
| ggcagctttc ccaccccaa gccctctgga tcctcagttg ctatgggatg cccctccagg ggagactttc caagcactcaagctc aggagaagaag aggagaagat aggagaagat aggagatgac caagagtgaag ggcctggcca tcctcaaga acctggtggg gaaggtacctg tcaagaagagaag | tggctcaaac | actcggggtc | cctatggctc | tgggtcaatc | raggecagge | ctccctcctt | |
| gcaccagctc agggctaagg gaaggaagat aggacgagt cagagctgc aggctctgcca 1020 tccgtgagaa actggtggg gcagctgt tcacagcag cagagatgaa aggactcacc cacagagatgaa gggcagctgt cagagggggagaagagaa | ggacagggag | teteaggget | acceptages | tecteagte | ctataggata | ccctccagg | |
| tcgtgggag aggcagctg cagaggccg ggggccaggg cacaggatgag ggcctggcca 1020 cacattcatca cagcatacac tgggaatttg gtggggcag aaagaaccag ggccactcc tcatcattgaa gggaaaccaa gctgaattg accaccggca cacaggatga aggcctgcca 1140 tcaatatgaa gggaaaccaa gctgaattg gtgggggcag aagaacccag ggccactcc cactttct ccccgggaat aactggccct gagacccata taccaccagga ggccagtccagggaggcaggacat gggcagcat tatccacacca tgggtaatgg gagcagttt gggggagaaca tggctggcct tatccacacca tgggtacagg ggcaggactg gggagaaca tggctggcaaca gggaagagtc tcaaggagaga aggagagac ctgggaaaca gggaagagtc ggacacacagg ggacaccaca aactgagaca tcaatatgaa catatgtac attcttgaaat cattttttttt aaggaacaaaa caatatgtac attctgaaat catttttett gaaacaaaa tcaaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaa | ggeagettte | agggetaage | gaaggaagat | aggagcagct | cagagetge | aggetetgee | |
| teggtggaga gggcagttg cagagggtg ggggcaggg cacaggattg aagagtttca catatcatca cagcatacac tgggaatttg gtgggggag aagaaccaa ggcaatcct tgggaatttg aggacccta cactgctgca tgtcccatgt caccetttet cecegggaat aactggecet gagacccta ggcaaccagga ggccatgcca tgggcaagca tgggtggcet tatccaccac tgggtcacgt cggttacca gggaagacat ggggaagaca gggaagatctt gggggaagaca gggaagatctt gggggaagaca gggaagatct ggggaagaca gggaagatct ggggaagaca gggaagatct ggggaagat cataatgtaa gggtagggag acgggaagttg 1380 tccaagcaga aggcaagaca cataatgtaa attetgaaat gggtagggag acgggaattt tacaccttaa agggatteta aaggaagaaga attaattata tacacataa aaaaaaaaa aaaaaaaa | ttcctcacag | acctggtggg | gcaggtcctg | ttcacagcag | caggagtgaa | ggcctggcca | 1020 |
| catatcatca cagcatacac tgggaatttg gtggggcag aagaaccag ggccactcc 1140 ccaactttat agaggaaaccaa gctgaatgtg accaccggc cactgctgca tgtcccatgt 1200 ccacctttct ccccgggaat aactggcct gagacccca gggcaggcag ccgggaagact gggcggcacccatcc tggccaaga ggccggacccatccttt tccccgggaagac tggctggcct tatccacca gggcaggacgggacg | tcggtggaga | gggcagctgt | cagagggctg | ggggccaggg | cacaggattg | aagagtttca | |
| ccacctttct ccccgggaat aactggccct gagaccccta gacccaagga ggcctgtcca tgccaagcat ccgggaagca tgggtggcct tatccacca tgggtcacgt cggttccag tgggagaccatg ggagactctt ggggggaacaca gggagagct gggggagacaca gggagacc ctgggaaatg cataatgtaa ggacacaca aaggaggacc ctgggaaatg cataatgtaa ggacacacaa aatagtat tcacccttaa agggatgctt aacaacacaa aaaaaaaaa aaaaaaaaa aaaaaaaa | catatcatca | cagcatacac | tgggaatttg | gtgggggcag | aagaacccag | ggccactccc | |
| tgcaagcat cgggaagca tggctggct tatccacca tgggtcacgt cggttccag gggagacttt tccaagcaga aggcaggacc ctgggaaatg cataatgtaa gggagagtct gggtggggag acgggagttt 1440 ttttttttt agggagaaat catatgtac attctgaaat cattttctct gtaaatgtt 1500 aggttcacaag tcaaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaa | tcaatatgaa | gggaaaccaa | gctgaatgtg | accaccggca | cactgctgca | tgtcccatgt | |
| gggcagcatg ggagatettt tetecatagt aacettgaat teteteatagt aacettgaat teteteatagt aacettgaat teteteatagt aacettgate teteteatagt aggtgatet aggtgatet aggtgatet teteteatagt aggtgatet teteteatagt aggtgatetgag teteteatagt aggtgatetgag teteteatagt aggtgatetgag teteteatagt aggtgatetgag teteteatagt aggtgatetgag teteteatagt aggtgatetgag teteteatagt aggagatet teggagggat ggtgatetgag teteteatagt teteteatagt aggagatet teggaggate aggtgatetgag teteteatagt aggagatet teggaggate aggagatet aggtgatetgag tetetagatet attetettget agagaggget aggagatetgag tetetagaggatetgag tetetagaggatetgag tetetagatetga | ccacctttct | ccccgggaat | aactggccct | gagaccccta | gacccaagga | ggcctgtcca | |
| tccaagcaga aggcaggacc ctgggaaatg cataatgtaa ggacatcaat aatagtatta 1500 ggatttcatt tcacccttaa agggatgctt aaaggagaag ataatattaa taataaaaa 1500 aaaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaa | tgccaagcat | ccgggaagca | tggctggcct | tatccaccca | tgggtcacgt | eggtteecag | |
| tttttttgt aagggaaaat caatatgtac attctgaaat cattttctct gtaaatggtt 1500 ggatttcatt tcacccttaa agggatgctt aaagggaaag ataatattaa taataaaaac 1560 l608 <210> 1335 <211> 1218 <212> DNA <213> Homo sapiens <400> 1335 ccacgcgtcc gatcgtcatt tcttcatagt accctatga aggtgtctta tttgttgaa tagaatttgtt tagaagatt caacagcgaatt aggcaaattg caacagcca agccacagct agcctccttc tttagaaaca ggttagttt tttgttgaa tttgttgaa aggactccttc ctcatcttt tttgtgaaa tttgtttgaa tagaatttgtt l80 gagcaaattg caacagcca agccacagct aggcacatag ggttagaagag ggttagagag ggttagagag aggagagtct tggaggggt tttgctagggtgattagagttagattgggacattagagtgaattgggacatagggtgggaagaggaggaggaggagggtgggggggg | gggcagcatg | ggagatettt | gggggcaaca | gggagagtet | gggtggggag | acyggactty | |
| ggattcatt tcacccttaa agggatgct aaaaggagaag ataatattaa taataaaaac 1560 1608 <210 > 1335 <211 > 1218 <212 > DNA <213 > Homo sapiens <400 > 1335 ccacgcgtcc catggtgtg aatcctatga aggtgttt tttggaagttt ttggaaggtgt aacctatga aggtgtctta aggtgtctta aggtgtctta aggtgtctt aggacgaattg caacagcca agcacacgt ttggaagagg aggacgtt ttggaagattt ttggaaattg aggtgtggaa aggacattggggtggaagggggggggg | tccaagcaga | aggeaggaee | caatatotac | attctgaaat | cattttctct | gtaaatggtt | |
| agctacaaag tcaaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaa | ggatttcatt | traccettaa | agggatgctt | aaaggagaag | ataatattaa | taataaaaac | |
| <pre><210> 1335 <211> 1218 <212> DNA <213> Homo sapiens <400> 1335 ccacgcgtcc gatcgtcatt tcttcatagt aggtgtctta tttgttgaat tagaggtgaa agctccttc ctcactcttt tttagaaaca gtttagttt attattatgc agaatttgt aggctccttc ctcactcttt ttttgaaaca gtttagttt attattatgc agaatttgt aggctcacact ctcgtgtatc tttgttgaa tggacgatta ttggaagggct ggtcacacct ctctctgtg ggtaggagag aggagagtct tggaggggc gctccatggg ggtcacacct ctctctgtg ggttttcgct ggtgattgag tttggagggc gctcatggg ggtcacacct ctctctgtg ggttttcgct ggtgattgag tttggaggag tttggagggc gctccatggg ggtagggag ggtgattgag tttggaggag tttggagggc gctcatggg ggtagggag ggtgattgag tttgtgaggag tttggaggag tttggaggag tttggaggag tttggaggag tttggaggag tttggaggag tttggaggag tttggaggag tttggaggagg tttggaggag tttggaggagg tttggaggagg tttggaggagg tttgaggaggct ggtggaggagggt gattgaggaggt tccaggggaggagggt attccacaca gagaagggct ggaggagggct ggagggagggaggggag</pre> | agctacaaag | tcaaaaaaaa | aaaaaaaaaa | aaaaaaaaaa | aaaaaaaa | • | 1608 |
| <pre><211> 1218 <212> DNA <213> Homo sapiens <400> 1335 ccacgcgtcc gatcgtcatt tcttcatagt agctctatt agggtcttt ttttagaaaca ggttagttt attattatgc agaatttgtt agcatctagaattt caacagcca agccacagct agctccatcd agctccacaa gagccctctc attagaagatt tttgagaaattg agctcattt tttgagaaaca ggttagttt attattatgc agaatttgtt aggttagaattagaattggataactggattagatta</pre> | g | | | | | | |
| <pre><212> DNA <213> Homo sapiens <400> 1335 ccacgcgtcc gatcgtcatt tcttcatagt aaccctgact caaggggttt tggaagattt tccagtggtct caatggtgtg aatcctatga aggtgtctta tttgttgaat tagaggtgaa 120 agcctccttc ctcactcttt tttagaaaca gtttagttt attattatgc agaatttgtt 180 gagcaaattg caacagccca agccacagct agctcacaaa gagcccttcc atgagccctc 240 aacctgggat ctcgtgtatc tttgttggaa tggacattag gtttccaagt ccaggcctgt 300 gatttagaag ggtcaggttg ggtaggagag aggagagtct tggaggggct gctccatggg 360 ggtcacacct ctctcctgtg ggttttcgct ggtgattgag ttctgagggca ttttgctgcat tggagcaggt tcgggtcaa aacgcccaa gagaagggct 420 tgactgttta agctttaact cggtggacag tggaattgag ttctgagaga caggagggct gctcatggg 360 ggtcagacca tccccagtga gtttgactt atatgcacat aaagccccaa gagaagggct 420 tgagcagga tcccagtga gtttgactt attctttgct caaataggtg aagcccacgg 600 tcccggcctc gaaggtgtc tcgtgggcaa gcctgccgag ttcaccatcg ataccaaagg 660 agctggtact ggaggtctgg gcttaacggt ggaaggtccg tgcgagccaa aatcgagtgc 720 tccgacaatg gtgatggac ctgctcct tcttaccttc ccacaaaacc cggggagtac 780 ttcgtcaaca tcctctttga agaagtccac atacctgggt cccgaacac ggaccggaag 690 gtgggtgaag ctggcctcct tagcgccac tgctcggaag ccgggaccgg ggccctgggc 960 gtgggtgaag ctggcctcct tagcgccac tcccttcaa agctgccat 840 gaaatgccct ttgacccct tagcgccac atacctggt ctcccttcaa agctggaca 90 gtgggtgaag ctggcctcct tagcgccac tgctcggaag cgggaccgg ggcctgggc 960 gtggaagctg tctcggacc tagccccc agcaggaag cgggaaggtca fgctcgaag cgggaaggaag caaggaag 660 gggaaccacac tcctctttga agaagtccac atacctggg caccacacac gggaaggaag 660 gtggaggaag ctggcccct tagcgccac accacacac cggggaaga 90 gcaccggaagccg ctggcccct tagcgccac accacacacacacacacacacacacacacac</pre> | <210> 1335 | | | | | | |
| <400> 1335 ccacgcgtcc gatcgtcatt tcttcatagt aaccctgact caaggggttt tggaagattt ccagtggtct caatggtgtg aatcctatga aggtgtctta tttgttgaat tagaggtgaa agcctccttc ctcactcttt tttagaaaca gtttagttt attattatgc agaatttgtt gagcaaattg caacagccca agccacagct agctcacaa gagcccttcc atgagcctc 240 aacctgggat ctcgtgtatc tttgttggaa tggacattag gtttccaagt ccaggcctgt 300 gatttagaag ggtcaggttg ggtaggagag aggaggtct tggaggggc gctccatggg ggtacacact ctctcctgtg ggttttcgct ggtgattgag ttctgaggca tttgctgcat 420 tgactgttg agctttaact cgtgtgcacg tgtgacacat aaagccccaa gagaagggct tggagcaggacggactggccaagctggcaggacgacgacgacgacgacgacgacgacgacgacga | | | | | | | |
| <pre><400> 1335 ccacgegtcc gategtcatt tettcatagt aaccetgact caaggggttt tggaagattt tettcatagt aggetetete ttttagaat tagaggtgaa 120 agcetectec ctcactettt tttagaaca gtttagttt attattatge agaatttgtt gagcaaattg caacageca agceacaca agceacaa agceceteca atgagecete atgagecete atgagecete accetggat etcegtgate tttgttgaat tggacattag gtttecaagt caaggecete aggecetec atgagecete ggttagattagag ggtcaaget tggagagagt tggagaggget getcaatgg ggtcacacet etcetectgtg ggtttteget ggtgattgag ttetgaggget getcaatgg ggtcacacet etcetectgtg ggtttteget ggtgattgag ttetgaggac tttggacacaca gagaaggget tggacacaca gagaaggget ggetggatgget ggetggatgget ggtgattgag ttetgaggacacacaca gagaaggget tggacacacacacacacacacacacacacacacacacaca</pre> | | | | | | | |
| ccacgcgtcc gatcgtcatt tcttcatagt aaccctgact caaggggttt tggaagattt ccagtggtct caatggtgtg aatcctatga aggtgtctta ttttgttgaat tagaggtgaa 120 agcctccttc ctcactcttt tttagaaaca gtttagttt attattatgc agaatttgtt 180 agcaaattg caacagcca agccacagct agctccacaa gagcccttcc atgaggcctc 240 aacctgggat ctcgtgtatc tttgttggaa tggacattag gtttccaagt ccaggcctgt 300 gatttagaag ggtcaggttg ggtaggagag aggaggtct tggaggggct gctccatggg 360 ggtcacacct ctctctgtg ggttttcgct ggtgattgag ttctgagggca tttgctgcat tttgctgcat ggctggcta gatcgacttc catgctgatt atatgcatgg gtgttgaaag caggagggct gctggcgac caggcagcaccac gatgaggcaccac gatgaggacactac atatgcatgg gtgttgaaag cagtgctggc agctgggcaa gctggggaa gctggcgag ttcccaaggg ggccacagg tcccaggca gctaacagg ggaaggtcg gctaacagg ggaaggtcg gctaacagg gagaggtcg gctaacagg ggaaggtcg tcggggaa gcctgcgag ttcaccatcg aacccaagg 660 agctggtact ggaggtctgg gctaacggt ggaaggtccg tgcgacaa aatcgagggc 720 tccgacaatg gtgatgggac ctgctccgtc tcttaccttc ccacaaaacc cggggagtac tcggggtgaag ctggcccct tagaggtcac atacctgggt ctcccttcaa agctggaag gctgggtgaag ctggccctc tagaggtcga gcatcgggg caggtctcga ggaaggtcg tctcggaag caggaccggg ggccctgggc gggaacacat tagcggtgaa gccggaaggcc caggaccggg ggccctgggc caggacctacg ggaaccacaa agccgaagac caggaccacaa gccgaagccacaaaaccaaagaa gccgaagccacacaaaccaaaagaa gccgaagccacacaaaccaaaaacacaaaaacaccacaaaaacaccaca | <213> Homo | sapiens | | | | | |
| ccacgcgtcc gatcgtcatt tcttcatagt aaccctgact caaggggttt tggaagattt ccagtggtct caatggtgtg aatcctatga aggtgtctta ttttgttgaat tagaggtgaa 120 agcctccttc ctcactcttt tttagaaaca gtttagttt attattatgc agaatttgtt 180 agcaaattg caacagcca agccacagct agctccacaa gagcccttcc atgaggcctc 240 aacctgggat ctcgtgtatc tttgttggaa tggacattag gtttccaagt ccaggcctgt 300 gatttagaag ggtcaggttg ggtaggagag aggaggtct tggaggggct gctccatggg 360 ggtcacacct ctctctgtg ggttttcgct ggtgattgag ttctgagggca tttgctgcat tttgctgcat ggctggcta gatcgacttc catgctgatt atatgcatgg gtgttgaaag caggagggct gctggcgac caggcagcaccac gatgaggcaccac gatgaggacactac atatgcatgg gtgttgaaag cagtgctggc agctgggcaa gctggggaa gctggcgag ttcccaaggg ggccacagg tcccaggca gctaacagg ggaaggtcg gctaacagg ggaaggtcg gctaacagg gagaggtcg gctaacagg ggaaggtcg tcggggaa gcctgcgag ttcaccatcg aacccaagg 660 agctggtact ggaggtctgg gctaacggt ggaaggtccg tgcgacaa aatcgagggc 720 tccgacaatg gtgatgggac ctgctccgtc tcttaccttc ccacaaaacc cggggagtac tcggggtgaag ctggcccct tagaggtcac atacctgggt ctcccttcaa agctggaag gctgggtgaag ctggccctc tagaggtcga gcatcgggg caggtctcga ggaaggtcg tctcggaag caggaccggg ggccctgggc gggaacacat tagcggtgaa gccggaaggcc caggaccggg ggccctgggc caggacctacg ggaaccacaa agccgaagac caggaccacaa gccgaagccacaaaaccaaagaa gccgaagccacacaaaccaaaagaa gccgaagccacacaaaccaaaaacacaaaaacaccacaaaaacaccaca | ∠400× 1335 | | | | | | |
| ccagtggtct caatggtgtg aatcctatga aggtgtctta ttttgttgaat tagaggtgaa agcctccttc ctcactcttt tttagaaaca gtttagtttt attattatgc agaatttgtt aggacaaattg caacagcca agccacagct agctccacaa gagcccttcc atgagcctc acctgggat ctcgtgtatc tttgttggaa tggacattag gtttccaagt ccagggctgt ggttagaagggggggggg | ccacacatcc | gatcgtcatt | tcttcatagt | aaccctgact | caaggggttt | tggaagattt | 60 |
| agcctccttc ctcactcttt tttagaaaca gtttagtttt attattatgc agaatttgtt gagcaaattg caacagcca agccacagct agctccacaa gagcccttcc atgagccctc acctgggat ctcgtgtatc tttgttggaa tggacattag gtttccaagt ccaggcctgt gatttagaag ggtcaggttg ggtaggagag aggagagtct tggagggggt gctccatggg ggtcacacct ctctcctgtg ggttttcgct ggtgattgag ttctgaggca tttgctgcat tggactgttt agctttaact cgtgtgcacg tgtgacacat aaagccccaa gagaagggct gcctggctca gatgcacttc catgctgatt atatgcatgg gtgttgaaag cagtgctggc tcgggcacg gcttgacacat atatgcatgg gtgttgaaag cagtgctggc tcgggcaca gcctgccgag ttcaccatcg ataccaaagg agctggtct ggaggtctg gcttaacgg tggaaggtccg tgcgagcaa aatcgagtgc tcggacaat gtgatggac ctgctccgtc tcttaccttc caacaaaacc cggggagtac agaatgccct tcggaagtccg tgcgaagtccg gcaccacagg gcaccacagg gcaccacagg cagggtgaac ataccaaaagc cagggagtac agaatgccct tcttaccttc caacaaaacc cggggagtac agaatgccct taaagtcgtg gcatcgggg caggtctgaa gcacgggaag ggccctgggc ctggaagctg tctcggaac tgccgaag caggaccaca gcacacagg gaccacacag gaccacacaaacacacac | ccagtggtct | caatggtgtg | aatcctatga | aggtgtctta | tttgttgaat | tagaggtgaa | |
| gagcaaattg caacagcca agccacagct agctccacaa gagcccttcc atgagcctc aacctgggat ctcgtgtatc tttgttggaa tggacattag gtttccaagt ccaggcctgt gatttagaag ggtcaggttg ggtaggagag aggagagtct tggaggggct gctccatggg ggtcacacct ctctcctgtg ggttttcgct ggtgattgag ttctgaggca tttgctgcat tgactgttgt agctttaact cgtgtgcacg tgtgacacat aaagccccaa gagaagggct 480 gctggctca gatgcacttc catgctgatt attctttgct caaataggtg agccggct gctggcacg tcccggcctc gaaggtggtc tcgtgggcaa gcctgccagg ttcacacgg agctggcacg tccggcacg tcgtggcaa gcctgccagag ttcacacacg agctggtact ggaggtctgg gcttaacggt ggaaggtccg tgcgagccaa aatcgagtgc tccgacacacg gtggatgac ctgctccgtc tcttaccttc ccacaaaacc cggggagtac agaatgccct ttgacccctc taaagtcgg gcatcggggc caggtctcga gcacgggaag ggccctgggc ggaacacacacacacacacacacacacacacacac | agcctccttc | ctcactcttt | tttagaaaca | gtttagtttt | attattatgc | agaatttgtt | |
| gatttagaag ggtcaggttg ggtaggagag aggagagtct tggaggggt gctccatggg 360 ggtcacacct ctctcctgtg ggttttcgct ggtgattgag ttctgaggca tttgctgcat 420 tgactgttgt agctttaact cgtgtgcacg tgtgacacat aaagcccaa gagaagggct 480 gcctggctca gatgcacttc catgctgatt atatgcatgg gtgttgaaag cagtgctggc 540 tcccggcctc gaaggtggtc tcgtgggcaa gcctgccgag ttcaccatcg aacccacgg 660 agctggtact ggaggtctgg gcttaacggt ggaaggtccg tgcgagccaa aatcgagtgc 720 tccgacaatg gtgatgggac ctgctccgtc tcttaccttc ccacaaaacc cggggagtac 1cgacacat gagagtccac atacctggt ctcccttcaa agctgacat 1cggaagccct ttgaccccc atacctggt gcatcgggc caggtctcga gcacgggaag 1cccatacg 1cggagaccacat 1cccatca agctgcacat 1cccatcacacacacacacacacacacacacacacacaca | gagcaaattg | caacagccca | agccacagct | agctccacaa | gagcccttcc | atgagccctc | |
| ggtcacacct ctctcctgtg ggttttcgct ggtgattgag ttctgaggca ttttgctgcat tgactgttgt agctttaact cgtgtgcacg tgtgacacat aaagccccaa gagaagggct 480 gcctggctca gatgcacttc catgctgatt atatgcatgg gtgttgaaag cagtgctggc tcccggcctc gaaggtggtc tcgtgggcaa gcctgccgag ttcaccatcg aagcccacgg 600 agctggtact ggaggtctgg gcttaacggt ggaaggtccg tgcgagccaa aatcgagtgc tcggcaaatg gtgatgggac ctgctccgtc tcttaccttc ccacaaaacc cggggagtac tcgtgaaatgccct tgacccctc taaagtcgtg gcatcgggc caggtctcga gcacgggaag gcggggtgaag ctggctcct tagcgcccc tgccggag tccccttcaa agctgacatt aagcgggtgaag cggggtgaag cgggaccaa aacaaagat gcacgggaag ggccctgggc caggtctcga gcacgggaag ggccctgggc cgggacctacg gggaacaaaa gccgaagtca tgtacacgtt gaccatgaag 1020 ggcacctacg cggtgaccta cgtgcccctg acggccgca tgtacacgtt gaccatgaag 1080 | aacctgggat | ctcgtgtatc | tttgttggaa | tggacattag | gtttccaagt | ccaggcctgt | |
| tgactgttgt agctttaact cgtgtgcacg tgtgacacat aaagccccaa gagaagggct 480 gcctggctca gatgcacttc catgctgatt atatgcatgg gtgttgaaag cagtgctggc 540 tgagcagcga tcccagtgca gtttgacttt attctttgct caaataggtg aagcccacgg agctggtact ggaggtctgg gcttaacggt ggaaggtccg tgcgagccaa aatcgagtgc tccgacaatg gtgatgggac ctgctccgtc tcttaccttc ccacaaaacc cggggagtac tcggagatac atacctgggt ctcccttcaa agctgacatt tagagtcgac ttgacccct taaagtcgtg gcatcgggc caggtctcga gcacgggaag ggcgaggacggg ggccctgggc ctggaagctg tctcggactc tagcgccct tggaagccaa accacaagat ggaaagctg tctcggactc tagcgccct tggaagccaa gccgaagtca gcacgggaag ggccctgggc caggacctacg ggaaccaaaa gccgaagtca tgtacacgtt gaccatgaag 1020 ggcacctacg cggtgaccta cgtgcccctg acggccgca tgtacacgtt gaccatgaag 1080 | gatttagaag | ggtcaggttg | ggtaggagag | aggagagtet | tggaggggct | tttactacat | |
| gcctggctca gatgcacttc catgctgatt atatgcatgg gtgttgaaag cagtgctggc 540 tgagcagcga tcccagtgca gtttgacttt attctttgct caaataggtg aagcccacgg 600 tcccggcctc gaaggtggtc tcgtgggcaa gcctgccgag ttcaccatcg ataccaaagg 660 agctggtact ggaggtctgg gcttaacggt ggaaggtccg tgcgagccaa aatcgagtgc 720 tccgacaatg gtgatgggac ctgctccgtc tcttaccttc ccacaaaacc cggggagtac 780 ttcgtcaaca tcctctttga agaagtccac atacctgggt ctcccttcaa agctgacatt 840 gaaatgccct ttgacccctc taaagtcgtg gcatcggggc caggtctcga gcacgggaag 900 gtgggtgaag ctggcctcct tagcgtcgac tgctcggaag cgggaccggg ggccctgggc 960 ctggaagctg tctcggactc gggaacaaaa gccgaagtca gtattcagaa caacaaagat 1020 ggcacctacg cggtgaccta cgtgcccctg acggccggca tgtacacgtt gaccatgaag | ggtcacacct | eccectgig | ggtttteget | tataacacat | aaaaccccaa | gagaagggct | |
| tgagcagcga tcccagtgca gtttgacttt attctttgct caaataggtg aagcccacgg 600 tcccggcctc gaaggtggtc tcgtgggcaa gcctgccgag ttcaccatcg ataccaaagg 660 agctggtact ggaggtctgg gcttaacggt ggaaggtccg tgcgagccaa aatcgagtgc 720 tccgacaatg gtgatgggac ctgctccgtc tcttaccttc ccacaaaacc cggggagtac tcgtcaaca tcctctttga agaagtccac atacctgggt ctcccttcaa agctgacatt gaaatgccct ttgacccctc taaagtcgtg gcatcgggc caggtctcga gcacgggaag 900 gtgggtgaag ctggcctcct tagcgtcgac tgctcggaag cgggaccggg ggccctgggc 960 ctggaagctg tctcggactc gggaacaaaa gccgaagtca tgtacacgtt gaccatgaag 1020 ggcacctacg cggtgaccta cgtgcccctg acggccgca tgtacacgtt gaccatgaag 1080 | gactgattga | gatgcacttc | catactaatt | atatgcatgg | gtgttgaaag | cagtgctggc | |
| tcccggcctc gaaggtggtc tcgtgggcaa gcctgccgag ttcaccatcg ataccaaagg agctggtact ggaggtctgg gcttaacggt ggaaggtccg tgcgagccaa aatcgagtgc tccgacaatg gtgatgggac ctgctccgtc tcttaccttc ccacaaaacc cggggagtac ttcgtcaaca tcctctttga agaagtccac atacctgggt ctcccttcaa agctgacatt gaaatgccct ttgaccctc taaagtcgtg gcatcgggc caggtctcga gcacgggaag gtgggtgaag ctggcctcct tagcgtcgac tgctcggaag cgggaccggg ggccctgggc ctggaagctg tctcggactc gggaacaaaa gccgaagtca gtattcagaa caacaaagat 1020 ggcacctacg cggtgaccta cgtgccctg acggccgca tgtacacgt gaccatgaag 1080 | tgaggagga | tcccagtgca | gtttgacttt | attetttget | caaataggtg | aagcccacgg | |
| agctggtact ggaggtctgg gcttaacggt ggaaggtccg tgcgagccaa aatcgagtgc 720 tccgacaatg gtgatgggac ctgctccgtc tcttaccttc ccacaaaacc cggggagtac 780 ttcgtcaaca tcctctttga agaagtccac atacctgggt ctcccttcaa agctgacatt gaaatgccct ttgacccctc taaagtcgtg gcatcgggg caggtctcga gcacgggaag 900 gtgggtgaag ctggcctcct tagcgtcgac tgctcggaag cgggaccggg ggccctgggc ctggaagctg tctcggactc gggaacaaaa gccgaagtca gtattcagaa caacaaagat 1020 ggcacctacg cggtgaccta cgtgcccctg acggccggca tgtacacgtt gaccatgaag 1080 | tcccgacctc | gaaggtggtc | tcgtgggcaa | gcctgccgag | ttcaccatcg | ataccaaagg | |
| tccgacaatg gtgatgggac ctgctccgtc tcttaccttc ccacaaaacc cggggagtac 780 ttcgtcaaca tcctctttga agaagtccac atacctgggt ctcccttcaa agctgacatt gaaatgccct ttgacccctc taaagtcgtg gcatcggggc caggtctcga gcacgggaag 900 gtgggtgaag ctggcctcct tagcgtcgac tgctcggaag cgggaccggg ggccctgggc ctggaagctg tctcggactc gggaacaaaa gccgaagtca gtattcagaa caacaaagat 1020 ggcacctacg cggtgaccta cgtgcccctg acggccggca tgtacacgtt gaccatgaag 1080 | agctggtact | ggaggtctgg | gcttaacggt | ggaaggtccg | tgcgagccaa | aatcgagtgc | |
| ttcgtcaaca tcctctttga agaagtccac atacctgggt ctcccttcaa agctgacatt gaaatgccct ttgacccctc taaagtcgtg gcatcggggc caggtctcga gcacgggaag 900 gtgggtgaag ctggcctcct tagcgtcgac tgctcggaag cgggaccggg ggccctgggc ctggaagctg tctcggactc gggaacaaaa gccgaagtca gtattcagaa caacaaagat 1020 ggcacctacg cggtgaccta cgtgcccctg acggccggca tgtacacgtt gaccatgaag 1080 | tccgacaatg | gtgatgggac | ctgctccgtc | tcttaccttc | ccacaaaacc | cggggagtac | |
| gtgggtgaag ctggcctcct tagcgtcgac tgctcggaag cgggaccggg ggccctgggc 960 ctggaagctg tctcggactc gggaacaaaa gccgaagtca gtattcagaa caacaaagat 1020 ggcacctacg cggtgaccta cgtgcccctg acggccggca tgtacacgtt gaccatgaag 1080 | ttcgtcaaca | tcctctttga | agaagtccac | atacctgggt | ctcccttcaa | agctgacatt | |
| ctggaagctg tctcggactc gggaacaaaa gccgaagtca gtattcagaa caacaaagat 1020 ggcacctacg cggtgaccta cgtgcccctg acggccggca tgtacacgtt gaccatgaag 1080 | gaaatgccct | ttgacccctc | taaagtcgtg | gcatcggggc | caggtctcga | gcacgggaag | |
| ggcacctacg cggtgaccta cgtgcccctg acggccggca tgtacacgtt gaccatgaag 1080 | gtgggtgaag | ctggcctcct | tagcgtcgac | rgcrcggaag | cyygaccggg | ggccctgggc caacaaagat | |
| ggcacctatg tggtgatta tgtgttttt | ctggaagctg | contracts | gyyaacaaaa | acaaccaaca | tatacacatt | gaccatgaag | |
| | tatgataaca | aactcqtqcc | acacttcccc | gcccgggtca | aggtggagcc | cgccgtggac | |

| accagcagga | tcaaagtctt | tggaccagga | atagaaggga | aäggtgggtt | tcatttaaaa | 1200 |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------------|
| aaaaaaaaaa | aaaaaaa | | | | | 1218 |
| <210> 1336 <211> 368 | | | | | | |
| <212> DNA <213> Homo | ganione | | | | | |
| | saprens | | | | | |
| <400> 1336 ccacgcgtcc | gaaaaggaat | tgcaatacta | tcttaaattg | aaggctttta | tttcaatgtc | 60 |
| cttacattta | aaatgggatc tatatatgtt | ttacaaggga tgttttgaat | agtaccaaaa gttggcagat | aagtaaagtt gccaatagcc | tattttgatg cttaacattt | 120 180 |
| gaaaaatggt | acttgaacat | caattatgtc | tcagagttcc | cttaaacttt | ttgggcttaa | 240 |
| | tcattttggt cagcttgctt | | | | | 300 360 |
| aaaaaaaa | cagecegeee | agaacccgga | | | 3 | 368 |
| <210> 1337 | | | | | | |
| <211> 685 <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1337 | tggtcatgac | cttttataca | tatatatata | tatqtqattq | ggttgaattt | 60 |
| agcttaaaaa | aagttatgca | agaaattcat | gcttgttgta | acgtgtcaaa | caatacagag | 120 |
| | aatacctagt gacagtgagt | | | | | 180 240 |
| atgaacaaaa | tggatgtgct | ctctgccctt | gtgatttgga | cagatgcttc | cagttaatct | 300 |
| | ttttatattg gttttcttcc | | | | | 360 420 |
| caagctacac | ctatttgtaa | cccagttttt | tcaattaatg | gctgggcatg | tccttccaag | 480 |
| tcattacata | tagatctggc ctttattcca | ttatcctttt | caacagctgt | acccacattc | ttcagtgcag | 540 600 |
| | ttttttttg | | | | | 660 |
| ctccatctat | aaaaaaaaa | aaaaa | | | | 685 |
| <210> 1338 <211> 781 | | | | | | |
| <211> 781 <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1338 | attcccgggt | caacccacac | atccaatcat | aattgctgcc | atarttcctq | 60 |
| tttgtctatc | tctctctcc | ctaggctcag | aattccttgc | caacagtggc | tgtgtctgat | 120 |
| atgtctttga | atcttcagta aataaatgaa | tcgaactcag | tgcttggcat atgtttctaa | atttgatgtt taagtataga | cataaaatgt aattqctctc | 180 240 |
| ttaccccaca | taagtcttgc | atatccttgg | tcattggcaa | tactagataa | ggatatgcta | 300 |
| tttaagtagc | ctaaacttaa ctaagtgctt | acaatgataa | agctacatta aactcattta | ctgcatgttt | actgaatgtc atttataacc | 360 420 |
| atttggtagg | agaggaaacc | aaggcatgga | gaggttaagt | attttgctca | aggccacaca | 480 |
| | ggtggaactg cagtctcaca | | | | | 540 600 |
| acctacgtat | ttattataat | gaaagaaatc | aagagccaaa | taaatcaagt | tgttagctat | 660 |
| | gaagggatac atatgcctaa | | | | | 720 780 |
| c | acacycciaa | agacccca | | | - 555-55-55 | 781 |
| <210> 1339 | | | | | | |
| <211> 829 <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |

```
<400> 1339
cccacgcgtc cgaaaccgtt ttagtttaaa atagatcatt tgatttaata aactatttta
                                                                      60
aaattgactg ttttgtaaac tgcatattca taaagtgttt atagtctgta gttaaatttt
                                                                     120
atgttactgt taacgaatta atttatttaa tttcttcctt catgttccta atcattttca
                                                                     180
tttcacttaa ttttagttta tgtcatagta atctgacatt tactcatcag caaattacaa
                                                                     240
tgcaaaagaa aaaatatttt taagaaatat tcatattttt ctttatggaa ataagtgtgt
                                                                     300
ttaaatgcac aagataggaa aggacgaacc tgatctctta tactagtatc cttaatcatt
                                                                     360
tttattgcca caactaacct cctcggactc ctgcctcact catttacacc aaccacccaa
                                                                     420
ctatctataa acctagccat ggccatcccc ttatgagcgg gcgcagtgat tataggcttt
                                                                     480
cgctctaaga ttaaaaatgc cctagcccac ttcttaccac aaggcacacc tacaccctt
                                                                     540
atccccatac tagttattat cgaaaccatc agcctactca ttcaaccaat agccctggcc
                                                                     600
                                                                     660
gtacgcctaa ccgctaacat tactgcaggc cacctactca tgcacctaat tggaagcgcc
accetageaa tateaaceat taacetteee tetacaetta teatetteae aattetaatt
                                                                     720
ctactgacta tcctagaaat cgctgtcgcc ttaatccaag cctacgtttt cacacttcta
                                                                     780
829
<210> 1340
<211> 1007
<212> DNA
<213> Homo sapiens
<400> 1340
ccacgcgtcc ggaaaggtct gagcatggtg ccgattaaat tctccattga aatgtacctt
                                                                      60
tgtgggtaca ttaaattatt ttagcataag tctagtgaag tgccagcagt agatactatg
                                                                     120
ttatttctgg agctcttgat gttgattttt gaggctgaac atgctcttag cctcaagcag
                                                                     180
gtcatatttg gaatacctga tgtgtgctcc tggttgctca gtgcttagga tgcataaaca
                                                                     240
                                                                     300
ggtagctgca gtctcatctc tcagtatata tacttttcag caaatctttt ttttctagat
aaattggaaa actacctttt ttctgcattt ttcatctgat gtcattatgg tatgtaggtg
                                                                     360
                                                                     420
gcagctttct tggggcacag ttgtctatat aactgttcat cacatgagtc attgtctgtt
tctgktcttc tgcctgaaaa ttccatcttg gaaatcgtgt catgcaatcg gtgactgcga
                                                                     480
                                                                     540
cattctactt gttatgtaca ctgccactgg ctttgtatgt tatgttgatg gactctacct
gtgctacagt gaagggataa agtgacttat taaattgagt cagactcagt tcctccaaat
                                                                     600
ggtatttcct gtaaaaatga tgccaagcaa gattctgcat aaaacatgca tatgctttac
                                                                     660
actgtaagca tacagtgcct accttttgtt attgtctctg cttaaatcct taccacagtt
                                                                     720
gtactcctgt ttgatcaagt ggccagttta actagatact agctttgaag aagttctgta
                                                                     780
ttggcccctg gaatgtgaca gttcatacca cattgaaaag gtaagaacca agtctttgta
                                                                     840
gagtagaaca ccttaaagtt aatccacttt taccaaattc ctctattgtt aaagcaacag
                                                                     900
tcctatattg gctaattttt aaaatcataa tgtgccacac tttacacatc cctagaatgt
                                                                     960
                                                                    1007
aagctagggg gcaggggcca aaaaaaaaa aaaaaaaa aaaaaaa
<210> 1341
<211> 854
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (345)
<223> n equals a,t,g, or c
<400> 1341
tegacecacg egteegecac aacagtegag tecaaateaa aegegeteca ggeaggtggg
                                                                      60
gctggggttc tgccagcctc ctggccagca ggggtgggtg ggcagactgg ggccagtatc
                                                                     120
agctgttctg cctggaccca ggccgggctg ggaaggcaca cttgtgctta tttcccgcct
                                                                     180
ccacttctgt gcaagcttgt gctgtcataa gcagagatca cagccccatt tcttggatgg
                                                                     240
agaaagtgga cactgaggtc tgaggctttt gaggacagtc aggagccctc ctatgggctc
                                                                     300
cagtgatgca ctcaccagct tctggtcctc ttcttccacc tcttnagagt gccttggctc
                                                                     360
cctcctgtcg tcctggggaa cctcggcccc agccctgcct ccccagccag tcacagctcc
                                                                     420
tccctggtca ccctgaggga gctcagggcc cggctggtag ctgggttgct ctgcttctgt
                                                                     480
```

540

ccccgactcc tgtggagcct ggcaggcaac tccatgatct gaccccggtt accttgacag

| ccctacctaa | cctcccctct | catggcccag | ccaccccaga | acctgaagag | gttttctage | 600 |
|-------------------------|------------|------------|------------|------------|--------------|------|
| | ttgccaggct | | | | | 660 |
| | gtgtgccagc | | | | | 720 |
| | ctgcttcccc | | | | | 780 |
| | gtgttgcaaa | | | | | 840 |
| aaaaaagggc | | aaaggaaaaa | aaaaaaaaaa | aaaaaaaaaa | aaaaaaaaaa | 854 |
| aaaaaaagggc | ggcc | | | | | 034 |
| <210> 1342 | | | | | | |
| <211> 1342 | | | | | | |
| <211> 12/4 <212> DNA | | | | | | |
| | | | | | | |
| <213> Homo | sapiens | | | | | |
| -400- 1240 | | | | | | |
| <400> 1342 | | | | | | |
| | cgtgcatatt | | | | | 60 |
| | aaagagagga | | | | • | 120 |
| - | tatatttctc | | | - | | 180 |
| | aataatgact | | | | | 240 |
| | aagtttgctg | | | | | 300 |
| | ttcccatttc | | | | | 360 |
| | ttcacccttc | | | | | 420 |
| | gagtacatgc | | | | | 480 |
| | tgtgaaagct | | | | | 540 |
| | agctcctcta | | | | | 600 |
| | tatcgactat | | | | | 660 |
| cttttttccc | aagtatggaa | atgtatctgg | gatttaagaa | aaaaaagcct | cataattaaa | 720 |
| | gcccttgtga | | - | | | 780 |
| ctttgtgtga | tgccaattaa | acttcaaggt | tgaagatggg | atattcatgg | taattatgtt | 840 |
| | ccagaaggga | | | | | 900 |
| gttcatcttg | aggaaacaca | atcaccaaaa | atgctttata | attaccgttc | ttgggagaga | 960 |
| gagtgtaaga | ataatgattg | agctgagtgc | agtggctcac | acctgtaatc | tcattgtctc | 1020 |
| aggaggctga | ggcaggagga | ctccttgagc | cctagagttt | gaggttgcag | tgagccatgg | 1080 |
| | gcactccagc | | | | | 1140 |
| gacacaatgg | ctcatgcctc | taagctcagc | actttgggag | gccaaagcag | gaggatcact | 1200 |
| tgaggtcatg | agtttgagac | cagcctgggc | aacataatga | gagcctgttt | ctacaaaaaa | 1260 |
| aaaaaaaaa | aaaa | | | | | 1274 |
| | | | | | | |
| <210> 1343 | | | | | | |
| <211> 1820 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1343 | | | | | | |
| | ttaaatggtt | | | | | 60 |
| | aataggtcat | | | | | 120 |
| attttaaaag | tgctcttcat | tcagatgaca | actcagttaa | aatattttc | aacaatgatg | 180 |
| | cattaattat | | | | | 240 |
| caaagaaaaa | atatttaagt | ctgcctttcg | gaaaaaccat | tgtactctca | gtgtcttcca | 300 |
| tcatttctta | cctacaaatg | ttgttttgtt | taaggaaggg | ttcttgacat | ttgccgtgta | 360 |
| aggttataga | ataaataaag | agtttattta | cctacggtag | tggtgattta | gtttatttt | 420 |
| aattcttact | gtctattata | ggtgtaactc | attgatttta | gttacaagtt | tttaatttaa | 480 |
| | cccaaaacta | | | | | 540 |
| | tgacacttat | | | | | 600 |
| | aatatatttt | | | | | 660 |
| | tttgagcaaa | | | | | 720 |
| | ataatgcctg | | | | | 780 |
| | gatcacttaa | | | | | 840 |
| | tttatcaaat | | | | | 900 |
| | tgacatgtat | | | | | 960 |
| | ttatagatac | | | | | 1020 |
| | tcttttgtga | | | | | 1080 |
| | agaatccctc | | | | | 1140 |
| | _ | | | 5 | - | |

| taacaacaac | ttttattatt | ctctcagagg | ttcacagcct | tccaaaattt | aagaaccact | 1200 |
|-------------------------|------------|------------|------------|------------|------------|------|
| | ttgttttttg | | - | | - | 1260 |
| | agtgagctga | | | | | 1320 |
| | tcaaaaaaaa | | | | | 1380 |
| - | ataatgaaaa | | - | | _ | 1440 |
| | tgaacacaag | | | | | 1500 |
| | gccagtatta | | | | | 1560 |
| - | atcctttatg | _ | | | - | 1620 |
| - | ttattacaag | | | | - | 1680 |
| | ttcaacatat | - | _ | | | 1740 |
| | cagctcagta | | | | | 1800 |
| | aaaaaaaaaa | gacacaaaaa | aaageegeae | ggaacccaaa | acgeeeegae | 1820 |
| 9 | * | | | | | |
| <210> 1344 | | | | | | |
| <211> 1984 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1344 | | | | | | |
| tccgtctttt | tctacatttt | agctcctaac | aatgcagttt | ctatttattt | gctgatttct | 60 |
| tactattgat | ttgatagtct | ataattaaca | tgtatctttt | taataatttt | tttttcagtt | 120 |
| cttggtactt | aattctagtc | cttctaaatc | agtattcagg | aactattgtg | ggagtgtatt | 180 |
| agaaagtgca | tgttcaaatg | ctaatcacat | atccagggag | actccagttc | tgtgttcatg | 240 |
| cctctcagcc | atcaaatgac | ttcgggaaat | attaattccc | ttctccaggt | tcaaagtcac | 300 |
| | tgaaagaaga | | | | | 360 |
| atttctgtgg | agggtctaga | gatttgctaa | ctgaaggcat | tatgggatag | ttagtgccca | 420 |
| cttctatgta | ggaaatattt | ttctgtctcc | cattgataat | agtaaataca | aaggaacatc | 480 |
| attagtttaa | tattatgaaa | cagcctgcag | tttcaaagga | atcatgtttt | tgatttggtg | 540 |
| agacagggct | ggattctcta | cagcctatat | tcatcattct | gcatatcatg | gttgttgatt | 600 |
| attgaggatt | aggcctccta | atcctacagc | tgtgtcctag | gtgcttggga | catatcattg | 660 |
| aacataacaa | aatccctgcc | tcatggagct | tgcatcctaa | cagagggaaa | tagtaaataa | 720 |
| taaatataat | aaataacaaa | aataaacaga | gtctttgaaa | gcagtaattc | tttggaaaaa | 780 |
| agaaacgaat | attgcaatat | tgcaatttaa | ggggattgat | agtgtattat | aagttattat | 840 |
| aagttgcaga | attaaatatc | agagcagtta | ttattgaaaa | aaaatcgagc | taatatttaa | 900 |
| gggagataaa | ggagtgaacc | atgttagttt | cggggcaagg | acattccaaa | ctgaggaaat | 960 |
| agcaagtgta | aaggtcctag | ggtaagagct | gccaaacatg | ttctgcaggt | caagcaggca | 1020 |
| taaagaggga | tgtaagttaa | tgtaatcatt | ttatcctttc | taatcttcaa | ttgatgttag | 1080 |
| agtctttta | gtgttcctaa | atgtctgtac | actagatcct | ggttggctga | attgccatct | 1140 |
| gcagtggtcc | tgctactgga | ttcctctgac | ctttggtcat | tcttcccttt | aaacctttta | 1200 |
| cattttgaca | cttcattatt | ttatgctgct | tattcaaaat | gtatactttc | ttttaacgtt | 1260 |
| attctttctt | tagtctcttt | acttcacttg | gagtcagatt | ctactagaat | cttttttgac | 1320 |
| cccaaaagca | tttggaaaca | catgaaatat | ttgggggaaa | gggagttgtc | atggtaacta | 1380 |
| | gtttcctaga | | | | | 1440 |
| | tttgagcaat | _ | | | _ | 1500 |
| | tgcctggtta | | | _ | _ | 1560 |
| | tttgccatgt | | | | | 1620 |
| | cctccttaca | | | | | 1680 |
| | tgtagtgttg | | | | | 1740 |
| | acttttttg | | | | | 1800 |
| | atacagggta | | | | | 1860 |
| | caaatgggta | | | | | 1920 |
| | aaagtataat | agtaaaaata | ataaaaaaaa | gatcaaaaaa | aaaaaaaaa | 1980 |
| aaaa | | | | | | 1984 |
| <210> 1345 | | | | | | |
| <210> 1345 <211> 789 | | | | | | |
| <211> 789 <212> DNA | | | | | | |
| <213> Homo | saniene | | | | | |
| -213/ HOMO | Papiens | | | | | |
| <220> | | | | | | |
| <221> SITE | | | | | | |
| _ ~ | | | | | | |

```
<222> (15)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (47)
<223> n equals a,t,g, or c
<400> 1345
cgtatgttgt gtggnattgt gagcggataa caatttcaca caggaancag ttatgaccat
                                                                     60
gattacgcca agtctaatac gactcactat agggaaagct ggtacgcctg caggtaccgg
                                                                     120
tccggaattc ccgggtcgac ccacgcgtcc gctcttatat taaaataata cctggccggg
                                                                     180
agcagtggct cacacctgta atcctagcac ctttggaggc cagggtgggc agatcgcttg
                                                                     240
aggtcaggag tttgagagca gcctggccaa catggcgaaa ccccgtctcc gcaaataata
                                                                     300
caaaaaatga gccgagcgtg gtggcacacg cctgtattct cagcctcctg agtgcctggg
                                                                    360
accacagtca tgccccacca cacctggcta atattttttg tttttgtaga gatgaggttt
                                                                     420
cgctatgctg cgcgggctgc gtcgaactcc tggcctcaag caaacctcct acctcagcgt
                                                                     480
cccgaaggct gggattatgg gtgcacgcca ctgcatctgg cccttttgta ggtattttt
                                                                     540
ccccctttct ctgattgtac ctattgattt ttctcccttt ctctgattgt acctattgat
                                                                     600
tgtttagagt ctctgaaaaa tcacactctt attggctaag tcttcacccc ataaatcttt
                                                                     660
                                                                    720
cctaataaat gctcattcag actctcagaa ctttcagcat taaagagttt tctattcatg
                                                                    780
ccctcaattc ctcccataag aactaaagtg atcttttgca aagtaaaaaa aaaaaaaaag
                                                                    789
ggcggccgc
<210> 1346
<211> 354
<212> DNA
<213> Homo sapiens
<400> 1346
ccacgcgtcc gaattttttc attttgccta attttagact tattgacaaa gtgctgggaa
                                                                     60
gacaggcgtt agcaccgtgc ccggcctctg tttcctgtta ttagtgattt tcctgcccaa
                                                                    120
gattgcaaca acaaatatgt agaactacag actgtttaga atgctgagac tgttctaaga
                                                                    180
aactttcaaa aacagtagca cttcaaggaa tggtcacttt ctatgaaaga aactggtttg
                                                                    240
atagccataa tcttattgct agctgctttt agcaaaagtc ttttcttgaa accaccacct
                                                                    300
atactettta aacaaataaa aactaaaate tettgetaaa aaaaaaaaaa aaaa
                                                                    354
<210> 1347
<211> 1487
<212> DNA
<213> Homo sapiens
<400> 1347
acccacgcgt ccgaaaaaaa aaaacctcat ggtgagatag gtgaaaaata gtctaaaata
                                                                     60
ataggaagcc ctttgctggt gctaaatttc catttgacag atggtgggcc tgaggcctag
                                                                    120
aggcatcggg gttgcccaag gtcacacaaa gcctgacatt gagcatttgt tttttaattt
                                                                    180
caaatctatt ttctcttaca ccccatctgc cttcatttct cttgctatga aaagacactg
                                                                    240
atggtttggc atacagtctg ggcgtagtca acattttgtg ggagaaaagg aaggaattag
                                                                    300
actaggagat ctgggatgca agtatatatt cggcccttga ttagcctttt gctttggggt
                                                                    360
taaaagggag tggctggggg tgggtgaggt tttaactaga tttccaagaa cctctttcct
                                                                    420
ccttgctttt gaagttgggg gtgggggtac tatattggtt tgtcagtcag ctactcatgc
                                                                    480
caaacattag gtcattatca ctttcactaa attcactcat tcaacacttt ttggtctgca
                                                                    540
                                                                    600
aaattttgaa acgggaaaga gttaatgaat acccaggcaa ttttaacaca atgatgaaaa
660
gctctaggag ggaattatat ctcagctcag attggacccc aaaggaggag ttagttgggt
                                                                    720
                                                                    780
agaatggaag agagtaagga agggaggctc tctgggcaga gccactcctg ccctccagag
agatagcata gcccttgaag gaggaacttg aagacatctt gtttggctga agcctcaggt
                                                                    840
aagtggggga tgtgacaaga ggtgaagttg ggtcattaga gggcagaaga gcttctaacc
                                                                    900
ttattcaaga gtctggactt takcctagag cagtagggag ccactgtagg atcatrtatg
                                                                    960
gggaggccaw ttaggacgtt aagaaacaac atcatttgcc cattcccttc acttggacct
                                                                   1020
ttgccgttta caaagtactt tcacttatgt tattacttta tgtaaactac tcaataatca
                                                                   1080
```

<211> 1084

```
tataaggtag aaggagatag atatctcctt gttgtagaca aggaatctaa agttctgaga
                                                                     1140
                                                                     1200
gggtagttga ctgattaatc aagtaagaag ctagaggggc caacacgtga gcctcgcact
tcagttctgg actgtactct agctgcaaca acctcttcct ctcaaaacag gtgctggagt
                                                                     1260
tttccacagg actctgtgtg ttgggcactt acccatagga ccagcccctt tcagtggtct
                                                                     1320
acaataacta ttggccgggc gcggtggctc acacctgtaa tcccagcact ttgggaggcc
                                                                     1380
gaggcgggcg gatccacgag gtcaggagat cgagaccatc ctggctaaca cggtgaaacc
                                                                     1440
ccgtctctac taaaaaaaaa aaaaaaaaaaa aaaaaaaggg cggccgc
                                                                     1487
<210> 1348
<211> 820
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (779)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (798)
<223> n equals a,t,g, or c
<400> 1348
                                                                       60
acccacgcgt ccgcccacgc gtccgctaat ctatgtcatt taagttctag attttacagt
attttggagt gatgaataaa tagcatgctg ttcttctata gctagcaaac aagactcagc
                                                                      120
                                                                      180
tttggagaca agaagaagga atacaggaga tgtttccttg aatgagtctt cttcctaaac
                                                                      240
tctgctagaa gtatgtcaga aagcgaaggt tacctcagtc tccaagtcat gaaaacatga
                                                                      300
ggtctttctg ttttctaggg aaagtatttc atttcctagt gtggcttttt gcacacccca
                                                                      360
gaaggaggaa gacaagcctt cgtgtcacct ttacatggta gttgagatgc ttcacatttg
                                                                      420
tacataacat cttatatqat cqaaagagga actcaaactc gacaggggag aataaggaaa
                                                                      480
tacatctaaa actgacaatt atgttaatcc ctcaattccc tgggccccca aaatagtctc
ctctatttgc catttcaaaa tagctaatga gagggtaatt ggacatgtag acactgaatt
                                                                      540
tocactgote atggtttect tecetggget eccagteace eggaaggeee eggattacet
                                                                      600
caaatgtcat aatgggktca tcgcattacg aattacctcc ttctgccaat aaactacaag
                                                                      660
ttctttgagg accaaaaaaa agwmraaaaa aaaaaaaagg gcgggccgcc ctaggaggat
                                                                      720
                                                                      780
ccaagcttaa ggtacccggt gccattggga cggccaatag ctccttccaa aagggggcnc
                                                                      820
cctaaaattc aaattcanct gggccgttcg gttttacaaa
<210> 1349
<211> 751
<212> DNA
<213> Homo sapiens
<400> 1349
gcacaacttc aacagatttt ctgtcatatt ctcaccagca catctgaatg aggctttgtg
                                                                       60
ttttccttgc tctcttgcat gttccttttc aactcatggc ccacagtgac tctcagagat
                                                                      120
ttatgccaaa attgcataca attgttttct gaatcataac ttgtctattt ttctgcctat
                                                                      180
gtgtgctact ttcagtttgt ttctcatcaa cattttgact ctcagaagag cctccatttg
                                                                      240
cccctttctc tctttaggta tctaagatct ttgaacacct ggacctttac atttgatcca
                                                                      300
accctatcaa ataatgaact tctcagagag gcatctgggg tcctggaact tcatgttgat
                                                                      360
gaagtcatat tatataatat gataaaaata ttctcatgca gtattttaaa taatttcaaa
                                                                      420
ttctagaaga agcaaatttc agcgacatgt cattgagttt ttatttggta aagctataat
                                                                      480
                                                                      540
tgtgcagtgt acaaagcact ttttaaaaaag atagtttatt ctgtcagggt atatgaagtt
agtatacagc cagaacagcc aagcctcaat tcttgtacct tgtgtctttt tattactgtt
                                                                      600
taatcaatag atatcatatg tttatgacag tttcaagaat tgtttttaaa cccaaactta
                                                                      660
attttawgtt tcagactatt gttagaaaaa caaaacaaga aaaaaaaaa agggcggccg
                                                                      720
                                                                      751
ctctagaggt ccaagcttac gtacgcgtgc a
<210> 1350
```

```
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (864)
<223> n equals a,t,g, or c
<400> 1350
                                                                    60
ccacgcgtcc ggatgtatca aattacaagg tttcatttgt aaataaggtg attaaaatga
                                                                   120
caaagtgtat taaaagaaat tgtattgtcc agtgaagttt taagaaacag aaaccataag
                                                                   180
gtgattatta tttttcaagc cccaaaggag aattcattag atgacatact tttaaagttc
                                                                   240
attacaggtg tgagccactg cacctggccg tataattttc tttttatcag ggatgtaggc
                                                                   300
360
ttttgctaaa cttcttttgt taaagaaagg cagttactgt tactgagata gctcgatggt
                                                                   420
atcctqtqca tttttttttg aaagctcaaa tagaagtctc acagttttag ggagggattt
                                                                   480
tttttagtct acaaaaagtt attagtatgc ctgtcctctt agtactgtac tgcctagtta
                                                                   540
ctctcctttc aaaaaaaaaa gcgtatattt attatatttc catggtaaac tagcagctac
                                                                   600
aataatqtac qctttttttt ttagtctaca aaaagttatt agtatgcctg tcctcttagt
actgttccta aaaatgcttg tacattctaa aactgcaatt ttactgatag ttgggaaatg
                                                                   660
                                                                   720
ttttttttt ttttcctgag ctgtagatct catttgctgt tggttgatta agaaaaaaat
                                                                   780
cttggccagg tgcgataggc taagtctgtg gtcccagcac tttgggaggc tgaggtgagt
                                                                   840
                                                                   900
ggattgcttg agctcaggag ttcnagacca gtctgggcaa cgaggcgaaa ccccatctac
                                                                   960
aaaaaaaaaa aaaaaatag aaaaattagc caggcctgta cacccatagt ccctcctact
                                                                  1020
caggaggctg aggtgggcgg attgcttgag cctagaaggt tgaggctgca gtgagccgag
                                                                  1080
atctcaccac tgcagtctac cctgggtgac agaatgagac cctgtttcaa aaaaaaaaa
                                                                  1084
aaaa
<210> 1351
<211> 1403
<212> DNA
<213> Homo sapiens
<400> 1351
                                                                    60
ccacgcgtcc gcccacgcgt ccgcccacgc gtccgatgac ccatggtggt catgaccaac
                                                                   120
tgcttttaaa aataccgaac caaaactgtt ttaaccttgc cccttgaatt atagcagttt
                                                                   180
atgagtcagc agcttatgct ataagggatt tgattattat ttacttcgag aaaactggct
                                                                   240
tccttgaaat ctcctgatat gcatgtaaaa ctgtcatgtc atgtaaatca aaggtaatat
tcaaggtgtc caactaagtg taaggtccaa aataatgacc aaatgatata aagcaactta
                                                                   300
                                                                   360
gccttggaaa caatatgaag catagtacta atgtagaata gttgtattgg agttgacttt
                                                                   420
atataaaaat gtcttacatc actctactta aattcatctt gtatttcttc tctctagtat
                                                                   480
ctgagttcag aaaacttatt ccatttataa tgttctcttt atattggtta tgctattttg
                                                                   540
atcttaccat tctttttaaa agtcttatta catatttatt tttccttttt tctttctatt
                                                                   600
ctatcattat acccataaga gagtttgtta cacctgaaaa gtgaaacaaa ctaaattaaa
                                                                   660
ataaaataaa agaataaata aagaacattg gtcaagtcta caaaagttaa aaatttaaaa
                                                                   720
atcacatggc tttgcttata ttgaaataaa tgttttgtgt atggttaata caaacttctc
                                                                   780
tatttcctgg catttattca atgagtaatg aatagcgtaa tgttactttt tacataaatg
                                                                   840
ccatttctgt aaactcactg tctaaatatt tactactcta ggtaattgcc agatctttta
                                                                   900
tatattaaag gtcatcaaga atgaattaat catttagcat tagtaataca actggaaggc
                                                                   960
tcaaqaaqtt caaqtatgtt aaaaatgctt tggaaagtct tctgaaaact attggactag
                                                                  1020
tcctatcata aatgggatat ttagatactg taccatttgc atgtgtgctt gtgtgtgt
gaatgtgtgt attggtgtat acgtgtgtgt ttgtgtcttt ctgcaggcac atctcatttt
                                                                  1080
aactgttaga gttgaatcag tcaaataatc acttttgtga taggctcact tttgtgaatg
                                                                  1140
                                                                  1200
atctgagtat cagaatagaa acctatagat atggccaaat ggtaatattc atttatgatg
                                                                  1260
atttttttaa aaacacatta attttattgt gacagaatgt tggttattaa tgtttgaaag
                                                                  1320
atctagttgc atacacagac tcttggatca aaaataaaga gctctgggct cacttcttag
atcagtctgt ggccaaaata aatgaattta attcctggca catcagtttg tcaaaattag
                                                                  1380
                                                                  1403
gcgggaaaaa aaaaaaaaaa aaa
```

<210> 1352

| <211> 1566 | | | | | | |
|--|---|--|--|---|--|---|
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1352 | | L | ~+~+~ | anatagagta | aaggaatggt | 60 |
| cccacgcgtc | cgtgctatgt catcccaaag | tgeecegetg | gccccaaacc | accactatac | ctaacctaat | 120 |
| cccacctcag | tatactaagt | agagagata | geaggeatga | aaactcttaa | actcaccago | 180 |
| tactocaato | aaacttctag | catteeteat | tagcatacta | atatotacto | ggcaaattta | 240 |
| taattottao | taatttgcaa | tagaatettt | tcattctgat | attcaaagta | ttttacaaac | 300 |
| actaaacttt | caaaatctct | cttataatag | gtattgttaa | attaattcca | tatttcatat | 360 |
| gaaaaaacaa | aagctgaggg | aggcaaagtt | acttacctaa | gaccacacag | tatttaactg | 420 |
| atggaacctg | agtagttcca | aatttccgtt | actcaactct | aacccgcata | taaaataaaa | 480 |
| tcagtgtaat | gctaagaaat | actattgtac | ctccaagaat | aaacttgaca | ataaaaatat | 540 |
| tgtcatggca | gtttaaagaa | atgtctttat | taaaatgagg | attccaaggt | aaaatcctct | 600 660 |
| aagtataaac | atatttatat | aagatattta | tatttaagaa | gatagtaatt | aggaaagtgg | 720 |
| ttttgtttt | aatatcatga aaaattgtta | toattaagtt | ttcaaatact | ctttcatata | agcaaagtge | 780 |
| taaadaagcc | atttattgaa | cttgactgtt | taaatataaa | aatgattgtc | ctaatggaga | 840 |
| aagcccctaa | aaagcaagta | actcctttta | cataaaaqac | ttttacatta | ttttggattt | 900 |
| tagtgaacag | tgttttttc | tattgtaatt | tctgattaga | tatcacatta | tttatgaatt | 960 |
| gtttgttatg | gtaggagtat | agtatctttt | ggaagaattt | atcttagtat | atattaacca | 1020 |
| atgagtcaat | taagattagc | caatttcaat | attatcctta | agcagtatta | ccattgtaat | 1080 |
| gctagaatag | acatatccca | gaccattaaa | aacctgacaa | ttctttatcc | aaaaaaaca | 1140 |
| agcaggcaaa | atatttacaa | aactattaaa | agattgggga | gctaaagtag | tggcaaatgc | 1200 1260 |
| attactctga | aaatcctcac | acatectetg | aaaaccaata | aagatgaaca | aataayatta | 1320 |
| cacataacca | ggctgggcac tcacctgaag | tgaggagttg | accigiaacc | tgaccaatat | gggaggetga | 1380 |
| tataagugaa | aaaatacaac | aattaggtga | atataataac | acatacctat | agtcgcagct | 1440 |
| acttgggagg | ctgaggcaga | agaatcactt | gaacccagga | ggcagaagtt | gcagtgagcc | 1500 |
| aagatcatgo | cactgcactc | cagcctgggc | aacagagtga | aactccatct | caaaaaaaa | 1560 |
| aaaaaa | - | | | | | 1566 |
| | | | | | | |
| <210> 1353 | • | | | | | |
| <211> 668 <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1353 | | | | | | |
| ggtaaactat | cttgagatta | | | | | |
| tcttgctctq | | aatggaggct | gcaaaatcac | tgtgtcccag | ggctcctttg | 60 |
| gtctgctaat | ctcttcttct | atgcagtttc | tgtattgtgg | gcgaggatgg | ttaccattgt | 120 |
| atatcactt | ; ctcttcttct : aagaagaaaa | atgcagtttc agagaagggc | tgtattgtgg attctcttta | gcgaggatgg cctttaagag | ttaccattgt gagtttgtgt | 120 180 |
| | ctcttcttct aagaagaaaa cactcagatc | atgcagtttc agagaagggc cctctggctc | tgtattgtgg attctcttta taactttgtc | gcgaggatgg cctttaagag acgtcacaac | ttaccattgt gagtttgtgt cagttgcaaa | 120 180 240 |
| actocataa | g ctcttcttct c aagaagaaaa c cactcagatc g aagtgagtga | atgcagtttc agagaagggc cctctggctc ctctgaccta | tgtattgtgg attctcttta taactttgtc ggcagccata | gcgaggatgg cctttaagag acgtcacaac tgttgcactt | ttaccattgt gagtttgtgt cagttgcaaa aatttttatt | 120 180 |
| actgcataag | ctcttcttct aagaagaaaa cactcagatc aagtgagtga aaggagagaa | atgcagtttc agagaagggc cctctggctc ctctgaccta cagattctgg | tgtattgtgg attctcttta taactttgtc ggcagccata ggagatagcc | gcgaggatgg cctttaagag acgtcacaac tgttgcactt agctatctgt | ttaccattgt gagtttgtgt cagttgcaaa aatttttatt cacattaagg | 120 180 240 300 |
| actgcataag tttgagtcag aggytgaggg | ctcttcttct aagaagaaaa cactcagatc aagtgagtga aaggagagaaa atttatttyc aggagaaatgg | atgcagtttc agagaagggc cctctggctc ctctgaccta cagattctgg attaaaaaaa cgggaacctg | tgtattgtgg attctcttta taactttgtc ggcagccata ggagatagcc aaaaaatggc ggaggcatag | gcgaggatgg cctttaagag acgtcacaac tgttgcactt agctatctgt ctcaggcctg cttgcagtga | ttaccattgt gagtttgtgt cagttgcaaa aatttttatt cacattaagg taatcccagc gccgagatgg | 120 180 240 300 360 |
| actgcataag tttgagtcag aggytgaggg caccactgca | ctcttcttct aagaagaaaa cactcagatc aagtgagtga aaggagagaaa atttatttyc aggagaatgg ctccagcctg | atgcagtttc agagaagggc cctctggctc ctctgaccta cagattctgg attaaaaaa cgggaacctg ggtgagagcg | tgtattgtgg attctcttta taactttgtc ggcagccata ggagatagcc aaaaaatggc ggaggcatag agactctctc | gcgaggatgg cctttaagag acgtcacaac tgttgcactt agctatctgt ctcaggcctg cttgcagtga tcaaaaaaaa | ttaccattgt gagtttgtgt cagttgcaaa aatttttatt cacattaagg taatcccagc gccgagatgg aaaaaaaaaa | 120 180 240 300 360 420 480 540 |
| actgcataag tttgagtcag aggytgaggo caccactgco aaaaaagccg | ctcttcttct aagaagaaaa cactcagatc aagtgagtga gaaggagaaa gattatttyc aggagaatgg ctccagcctg | atgcagtttc agagaagggc cctctggctc ctctgaccta cagattctgg attaaaaaaa cgggaacctg ggtgagagcg aaacagttaa | tgtattgtgg attctctta taactttgtc ggcagccata ggagatagcc aaaaaatggc ggaggcatag agactctctc cttttttgtt | gcgaggatgg cctttaagag acgtcacaac tgttgcactt agctatctgt ctcaggcctg cttgcagtga tcaaaaaaaa gttgttctgg | ttaccattgt gagtttgtgt cagttgcaaa aatttttatt cacattaagg taatcccagc gccgagatgg aaaaaaaaaa | 120 180 240 300 360 420 480 540 600 |
| actgcataag tttgagtcag aggytgaggo caccactgca aaaaaagcca ggttactgta | ctcttcttct aagaagaaaa cactcagatc aagtgagtga aaggagagaaa atttatttyc aggagaatgg ctccagcctg | atgcagtttc agagaagggc cctctggctc ctctgaccta cagattctgg attaaaaaaa cgggaacctg ggtgagagcg aaacagttaa | tgtattgtgg attctctta taactttgtc ggcagccata ggagatagcc aaaaaatggc ggaggcatag agactctctc cttttttgtt | gcgaggatgg cctttaagag acgtcacaac tgttgcactt agctatctgt ctcaggcctg cttgcagtga tcaaaaaaaa gttgttctgg | ttaccattgt gagtttgtgt cagttgcaaa aatttttatt cacattaagg taatcccagc gccgagatgg aaaaaaaaaa | 120 180 240 300 360 420 480 540 600 |
| actgcataag tttgagtcag aggytgaggo caccactgco aaaaaagccg | ctcttcttct aagaagaaaa cactcagatc aagtgagtga gaaggagaaa gattatttyc aggagaatgg ctccagcctg | atgcagtttc agagaagggc cctctggctc ctctgaccta cagattctgg attaaaaaaa cgggaacctg ggtgagagcg aaacagttaa | tgtattgtgg attctctta taactttgtc ggcagccata ggagatagcc aaaaaatggc ggaggcatag agactctctc cttttttgtt | gcgaggatgg cctttaagag acgtcacaac tgttgcactt agctatctgt ctcaggcctg cttgcagtga tcaaaaaaaa gttgttctgg | ttaccattgt gagtttgtgt cagttgcaaa aatttttatt cacattaagg taatcccagc gccgagatgg aaaaaaaaaa | 120 180 240 300 360 420 480 540 600 |
| actgcataag tttgagtcag aggytgagg caccactgca aaaaaagcca ggttactgta acagtccc | ctcttcttct aagaagaaaa cactcagatc aagtgagtga aagtgagagaa atttatttyc aggagaatgg ctccagcctg ttgattatt tagtatgtat | atgcagtttc agagaagggc cctctggctc ctctgaccta cagattctgg attaaaaaaa cgggaacctg ggtgagagcg aaacagttaa | tgtattgtgg attctctta taactttgtc ggcagccata ggagatagcc aaaaaatggc ggaggcatag agactctctc cttttttgtt | gcgaggatgg cctttaagag acgtcacaac tgttgcactt agctatctgt ctcaggcctg cttgcagtga tcaaaaaaaa gttgttctgg | ttaccattgt gagtttgtgt cagttgcaaa aatttttatt cacattaagg taatcccagc gccgagatgg aaaaaaaaaa | 120 180 240 300 360 420 480 540 600 |
| actgcataag tttgagtcag aggytgaggg caccactgca aaaaaagcca ggttactgta acagtccc <210> 1354 | ctcttcttct aagaagaaaa cactcagatc aagtgagtga aagtgagagaa atttatttyc aggagaatgg ctccagcctg ttgattatt tagtatgtat | atgcagtttc agagaagggc cctctggctc ctctgaccta cagattctgg attaaaaaaa cgggaacctg ggtgagagcg aaacagttaa | tgtattgtgg attctctta taactttgtc ggcagccata ggagatagcc aaaaaatggc ggaggcatag agactctctc cttttttgtt | gcgaggatgg cctttaagag acgtcacaac tgttgcactt agctatctgt ctcaggcctg cttgcagtga tcaaaaaaaa gttgttctgg | ttaccattgt gagtttgtgt cagttgcaaa aatttttatt cacattaagg taatcccagc gccgagatgg aaaaaaaaaa | 120 180 240 300 360 420 480 540 600 |
| actgcataag tttgagtcag aggytgagg caccactgca aaaaaagcca ggttactgta acagtccc | ctcttcttct aagaagaaaa cactcagatc aagtgagtga aagtgagagaa atttatttyc aggagaatgg ctccagcctg ttgattatt tagtatgtat | atgcagtttc agagaagggc cctctggctc ctctgaccta cagattctgg attaaaaaaa cgggaacctg ggtgagagcg aaacagttaa | tgtattgtgg attctctta taactttgtc ggcagccata ggagatagcc aaaaaatggc ggaggcatag agactctctc cttttttgtt | gcgaggatgg cctttaagag acgtcacaac tgttgcactt agctatctgt ctcaggcctg cttgcagtga tcaaaaaaaa gttgttctgg | ttaccattgt gagtttgtgt cagttgcaaa aatttttatt cacattaagg taatcccagc gccgagatgg aaaaaaaaaa | 120 180 240 300 360 420 480 540 600 |
| actgcataag tttgagtcag aggytgaggg caccactgca aaaaaagccg ggttactgta acagtccc <210> 1354 <211> 313 | g ctcttcttct c aagaagaaaa c cactcagatc g aagtgagtga g aagtgagagaa g atttatttyc c aggagaatgg c ctccagcctg g ttgattattt a tagtatgtat | atgcagtttc agagaagggc cctctggctc ctctgaccta cagattctgg attaaaaaaa cgggaacctg ggtgagagcg aaacagttaa | tgtattgtgg attctctta taactttgtc ggcagccata ggagatagcc aaaaaatggc ggaggcatag agactctctc cttttttgtt | gcgaggatgg cctttaagag acgtcacaac tgttgcactt agctatctgt ctcaggcctg cttgcagtga tcaaaaaaaa gttgttctgg | ttaccattgt gagtttgtgt cagttgcaaa aatttttatt cacattaagg taatcccagc gccgagatgg aaaaaaaaaa | 120 180 240 300 360 420 480 540 600 |
| actgcataag tttgagtcag aggytgaggg caccactgca aaaaaagccg ggttactgta acagtccc <210> 1356 <211> 313 <212> DNA <213> Home | g ctcttcttct c aagaagaaaa c cactcagatc g aagtgagtga g aaggagagaa g atttatttyc c aggagaatgg c tccagctg g ttgattattt a tagtatgtat sapiens | atgcagtttc agagaagggc cctctggctc ctctgaccta cagattctgg attaaaaaaa cgggaacctg ggtgagagcg aaacagttaa | tgtattgtgg attctctta taactttgtc ggcagccata ggagatagcc aaaaaatggc ggaggcatag agactctctc cttttttgtt | gcgaggatgg cctttaagag acgtcacaac tgttgcactt agctatctgt ctcaggcctg cttgcagtga tcaaaaaaaa gttgttctgg | ttaccattgt gagtttgtgt cagttgcaaa aatttttatt cacattaagg taatcccagc gccgagatgg aaaaaaaaaa | 120 180 240 300 360 420 480 540 600 |
| actgcataag tttgagtcag aggytgaggg caccactgca aaaaaagccg ggttactgta acagtccc <210> 1354 <211> 313 <212> DNA <213> Home <400> 1356 | g ctcttcttct c aagaagaaaa c cactcagatc g aagtgagtga g aaggagagaa g atttatttyc c aggagaatgg c ctccagcctg g ttgattatt a tagtatgtat sapiens | atgcagtttc agagaagggc cctctggctc ctctgaccta cagattctgg attaaaaaaa cgggaacctg ggtgagagcg aaacagttaa taaaaataac | tgtattgtgg attctctta taactttgtc ggcagccata ggagatagcc aaaaaatggc ggaggcatag agactctctc cttttttgtt cattagcaat | gcgaggatgg cctttaagag acgtcacaac tgttgcactt agctatctgt ctcaggcctg cttgcagtga tcaaaaaaa gttgttctgg ctaggcatag | ttaccattgt gagtttgtgt cagttgcaaa aatttttatt cacattaagg taatcccagc gccgagatgg aaaaaaaaa aatgagtctt tggtatgtgc | 120 180 240 300 360 420 480 540 600 660 668 |
| actgcataag tttgagtcag aggytgaggg caccactgca aaaaaagccg ggttactgta acagtccc <210> 1356 <211> 313 <212> DNA <213> Home <400> 1356 gctgacaata | ctcttcttct aagaagaaaa cactcagatc aagtgagtga aagtgagagaa atttatttyc aggagaatgg ctccagcctg ttgattattt tagtatgtat sapiens accaaatgctg | atgcagtttc agagaagggc cctctggctc ctctgaccta cagattctgg attaaaaaaa cgggaacctg ggtgagagcg aaacagttaa taaaaataac | tgtattgtgg attctctta taactttgtc ggcagccata ggagatagcc aaaaaatggc ggaggcatag agactctct ctttttgtt cattagcaat | gcgaggatgg cctttaagag acgtcacaac tgttgcactt agctatctgt ctcaggcctg cttgcagtga tcaaaaaaa gttgttctgg ctaggcatag | ttaccattgt gagtttgtgt cagttgcaaa aatttttatt cacattaagg taatcccagc gccgagatgg aaaaaaaaa aatgagtctt tggtatgtgc | 120 180 240 300 360 420 480 540 600 660 668 |
| actgcataag tttgagtcag aggytgagge caccactgca aaaaaagceg ggttactgta acagtccc <210> 1356 <211> 313 <212> DNA <213> Home <400> 1356 gctgacaata ctgttgctc | g ctcttcttct c aagaagaaaa c cactcagatc g aagtgagtga g aaggagagaa g atttatttyc c aggagaatgg c ctccagcctg g ttgattatt a tagtatgtat sapiens | atgcagtttc agagaagggc cctctggctc ctctgaccta cagattctgg attaaaaaaa cgggaacctg ggtgagagcg aaacagttaa taaaaataac | tgtattgtgg attctctta taactttgtc ggcagccata ggagatagcc aaaaaatggc ggaggcatag agactctct ctttttgtt cattagcaat agagcaacag tattgtcagt | gcgaggatgg cctttaagag acgtcacaac tgttgcactt agctatctgt ctcaggcctg cttgcagtga tcaaaaaaa gttgttctgg ctaggcatag | ttaccattgt gagtttgtgt cagttgcaaa aatttttatt cacattaagg taatcccagc gccgagatgg aaaaaaaaa aatgagtctt tggtatgtgc | 120 180 240 300 360 420 480 540 600 660 668 |

```
tggaagacag tttggcagtt tcttagaaag ttaaacacat ttactctatg gcccaggatc
                                                                    240
                                                                    300
tcattcctgg ggatttactc aagagcaatg aaaaccccac tcaaagatct ctacaatcca
                                                                    313
aaaaaaaaa aaa
<210> 1355
<211> 1082
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1065)
<223> n equals a,t,g, or c
<400> 1355
gcagtcactt tagtaaaata agtacattat attacatgtc attataatat tgtgttatca
                                                                     60
                                                                    120
cataaactga gcataccaca atccatattc tacggactgt cttctccttt ttccactgat
                                                                    180
tacatgtgag tggttcttag ataacacacc ctaaagacaa agaaagaaag gaagagaaac
agaattaaca agagagggaa aagagtgtca gtttcctttg ctatgactat taaatgactc
                                                                    240
                                                                    300
agtgaatttt cttagggtaa agttactgcc attcaaaatt atagtaaatt ggtaatattt
                                                                    360
tacagtcata tattttkgt ttcagctgag tatatttkgt tycagcttaa gtatgggcac
                                                                    420
atatctccca cactttttta gatcagatat gacacataaa aaagatggct ttggttttt
                                                                    480
aaaaactctt acaattagca actaatggca gtgtgaacat ataattggtt ttataggtaa
                                                                    540
atcaatttgt cgacttacaa acttttaaga cttcatttgt tattcataac tacattttgc
tgaggaaaaa aatacttgtt tatgtcaaaa aggggagaat ttccattaag ttcatactct
                                                                    600
                                                                    660
ccatgatgag aaagcacacc ccgaaataag acattaaatg ttagaatgta ttacttttcc
                                                                    720
tggttagaaa agaacttggc tttgggagtg gaccctatgc gtatcatggt gtggcaatgc
                                                                    780
cattttgttt ccaaagataa catttgtaga tgtacagatg tcctgaactt tattaaacca
                                                                    840
cagctgtggt tatcacatat ttattcaaaa gatattacag ctatcaaagc agtatgtcag
                                                                    900
caaagtcctt agtagtttgc ttaaattgcc ctttcatttt actgtatctg taagtattca
960
                                                                   1020
aacacgaagc attatttaca tggaagcatt cagaaatcat gaatagcatt atcacaaatg
                                                                   1080
agttatgaca ttttataggt tcacaaaaac gagagaaaaa aaaanaaaaa gggcggcccg
                                                                   1082
<210> 1356
<211> 1316
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (24)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (37)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (48)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (61)
<223> n equals a,t,g, or c
<220>
```

```
<221> SITE
<222> (121)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1305)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1308)
<223> n equals a,t,g, or c
<400> 1356
                                                                     60
ccatttttcc ccccaggaaa ccancctatg cccatgnttt ccgccaanct tttaattccg
                                                                    120
nctcccctat agggaaaacc tggtacgcct ccaggtcccg gtccggaaat tcccggggtc
                                                                    180
naccccacgg cgtcccgcaa aacatcagtg cctttcaaat gctaaggaaa ctctgtcaaa
                                                                    240
tgatctttct ttttttgttt tttgtttttt gttttttggt ctcacaatat gtctcaccat
                                                                    300
tttatagtaa caccttcttt ggtgtccagt aaaatgaaaa cttgagagat ttctactgct
                                                                    360
tcaacaattt ttttaattac gtggagattt taattttcta tgagctatct gaaagaagag
                                                                    420
tagaaaataa atacaatctt gaaaaatccc atgaaaacca taggcaaata ttaaatgatt
                                                                    480
gaggetttte tttttaaaa egtggetatg ttettttag atageetgga tteagggaet
                                                                    540
tgggaccttg taaagccaaa gctgattgac actcataagg atgtcttcct gtatgccatt
                                                                    600
ctaatagaca cacatgttac ctgatagagc tgggcagagg tgcttcagtc tcaggctgaa
ggttctgaag tccagggaag ttgggtgctg cccagggtta caagccatga gtgggagagc
                                                                    660
                                                                    720
tcaagtataa gacacttagg ccagacttcg tttcacaagt ccaggctgct cctcaccaaa
                                                                    780
attctgtgtg tatatatata ttttttcttt ttctgattct catgcatatt gtagataatt
                                                                    840
tggaatatac agtaaactga aaattctata tccacatttc tgtgagcttt ttaaaatgtg
                                                                    900
agtgattact ggccaggcat gggggctcac atctataatc tcagcaattc gggaggctga
ggtgggagga taacttgagg cctggagttt aagacgagcc tgggcaacat agaaagaccc
                                                                    960
                                                                    1020
tgtctctaca gggagaaaaa aaaaaaccta acaaacatta gccaggagtt tgagcccaag
                                                                    1080
agtttgaagt tacagtgggc cttgatcgca ccactgcact gcagcctggg cgacagagca
                                                                    1140
1200
tccaagctta cgtacgcgtg catgcgacgt catagctctt ctatagtgtc acctaaattc
aattcactgg ccgtcgtttt acaacgtcgt gactgggaaa accctggcgt tacccaactt
                                                                    1260
                                                                    1316
aatcgccttg cacacatccc cctttcgcca gctggcgtaa tagcnaanaa ggcccg
<210> 1357
<211> 722
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (665)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (719)
<223> n equals a,t,g, or c
<400> 1357
ggaacaaaca aaaaaatctc tctaacgttt tattctgcct tatcctcaat tggagaaagg
                                                                      60
gatgaaggct gccacgtatt agctgtgatt tcttaacttc tctaccttta atttcctcat
                                                                     120
                                                                     180
ctatgagatg atgttgaacc tgtctacatc ataagtagtt aaggatgaaa tgaatgggta
                                                                     240
tatgaacatt gtgttgggga cgtagtagat actcagcaaa tgtgtcttcc cagtgatgtc
                                                                     300
acatttcctc tacttctgct tggtatgtgt ctcgttcccc tgagcccagc tcatgtcact
gtgacgtgag agggcaggtg aagtgttagt tgttcccact ccatcatgcc ctttcacagt
                                                                     360
tgttagtctg atgctaaaga cttaagattt atttcttcat tgttgttgtt gttgtttttg
                                                                     420
```

```
tagagatcag gggttcgaga ccagcctggc caacatggtg aaaccctgtc tctactaaaa
                                                                      480
                                                                      540
ctacaaaaat tggccaggcg tggtggtagg cgcctgtgat cctagctact tgggaggctg
aggcaggaga atggcttgaa cctgagaggt ggaggttgca gtgagctgag atgacgccac
                                                                      600
tgtgctccag cctgggcgac agagcgagac cctgtctcaa agaaaaaaaa aaaaaaaagg
                                                                      660
                                                                      720
gcggncgcyc tagaggatcc aagcttacgt acgctgcatg cgamgtcawa gccctccana
                                                                      722
<210> 1358
<211> 858
<212> DNA
<213> Homo sapiens
<400> 1358
                                                                       60
ccacgcgtcc gaaaaaaggg ttatgtaagg aaagacaaga gtatgtttaa gacggtttct
accattttgc ttagggcagt ccctataatc ttagaggcaa cagtaagaga gtgaaatatt
                                                                      120
                                                                      180
gcaggcagtg aattgggcta atttgccatc actccgattt cttcaaaact ctcttaaaga
                                                                      240
tgagttaatg ttgctggcct aaaatagtct catatatggg actcccttag aaatgatagt
                                                                      300
gatagtgttt tatttaataa atctgctgtg atggtctaag gcaaacttga cttatggaat
                                                                      360
tccagttagc actgttgatg ataataatta cagttggttt tgcatctgta cagcacttta
caattataaa tactctttat ggaagtagtt tccttgggat gatatatatc tggccattat
                                                                      420
                                                                      480
tctgttcaat aggtgtgcta tattatggca aatgttgcaa ttatcattgt acatattggt
                                                                      540
atgtttattt gtatatagaa tcatactcat accacagagt ctaaagaagt agcagcagtg
                                                                      600
tggtgtagtt agcaatcaag aacactggac cttaaataac tgggtccaaa tatcactttc
accatttatt cactgtgagt catgagaaaa ttgttttagt tttgctgtct gtacaatggc
                                                                      660
                                                                      720
atactactac ctgtctcata cacacacaca ggcacacaca aagttttact aattggttca
tactaggaac tctccaagta tcaattatcc ctgttacaga aacagtatgt atagagagac
                                                                      780
                                                                      840
aatcatggag attccctgtc caaggatttt cctgatagct tcctctggtc catatcaaaa
                                                                      858
tgaaaaaaa aaaaaaaa
<210> 1359
<211> 1206
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (38)
<223> n equals a,t,g, or c
<400> 1359
gaaaccccat ctctttaaaa aaaaaaaaaa tccaaaantt agctgggcat ggtggcatgc
                                                                        60
agtggtagtc ccagctactc aggaggctga ggtgggagga tcactggaac ccgggagcag
                                                                       120
agactgcagt gagctgagat cacactactg cattccagcc tgagcaacag agcaagacac
                                                                       180
acacacacat caatttattt tagttgtata atgcttttct attagtaaag catcagctaa
                                                                       240
gcttcagtgg cctgctccat cccctaatga ctcccatggg ctatcctaaa ggaacttcca
                                                                       300
gaacctttgt tggtgttgt acattgacca tgcagaccaa tttgggcaca actggacatt
                                                                       360
gattcctttt acacaagagc tgcctcccaa agatagataa attttcccag ccctaaatat
                                                                       420
                                                                       480
gaatcatggg gcaagatatt ggtcgtattg atggtgaacc tttcctactg gattctttgc
                                                                       540
atgccacata gcaggattca ttgcctttct ctcatcatgg atggcatgca gcagcaccca
agtattcttc attctttgca gggaaaaaat tgtgcatggg ggctgaaatg tagtatgtgt
                                                                       600
                                                                       660
agctcaatta gtctctcctc tgtgatgcaa aatggaatat tcaatggcag atctgccctt
                                                                       720
ctgagatgct gaccatccaa aacaccttgt ttatggtgca ccatgattag ctcacacaca
                                                                       780
atgccaaggc tgtgcttcta ttatctgata catagtttga caatgggtaa ttctactcag
                                                                       840
acceteceta etgattgget aggatgeetg teaggaacte attatgetae tggttgtttg
                                                                       900
gggatcccca tagtggacta ctttcaggaa tggcatgaat tgtaaccaac tgagtgctgc
                                                                       960
ccccactgtt acggaagttt ataaaacctt agttccagaa gacccaaagg agagtactgg
tttgtgtttg gtgcttggcc tagatccagc caccactctg aaactcatca catcttcatt
                                                                      1020
                                                                      1080
gacagggagg gagcccagga catatgtgtg gctcattgac cagaaggctt tcttagtccc
                                                                      1140
aacagccatg aaccatgcac ttatggatac ccagcctttt agggctacgt gaaatgcatc
                                                                      1200
cttgtaacat cattgtattc tttcaataaa tagccttctg agttgaawaa aaaaaaaaa
                                                                      1206
aaaaaa
```

```
<210> 1360
<211> 2102
<212> DNA
<213> Homo sapiens
<400> 1360
ccacgcgtcc gcagccttgg aaaggaaagc agctgagatc cagaggagtg gaaggctccc
                                                                     60
                                                                     120
ccttgactaa agctaaatca ctaaaccttg gccatggtca cttcctcttt tccaatctct
gtggcagttt ttgccctaat aaccctgcag gttggtactc aggacagttt tatagctgca
                                                                     180
                                                                     240
gtgtatgaac atgctgtcat tttgccaaat aaaacagaaa caccagtttc tcaggaggat
                                                                     300
gccttgaatc tcatgaacga gaatatagac attctggaga cagcgatcaa gcaggcagct
                                                                     360
gagcagggtg ctcgaatcat tgtgactcca gaagatgcac tttatggatg gaaatttacc
agggaaactg ttttccctta tctggaggat atcccagacc ctcaggtgaa ctggattccg
                                                                     420
                                                                     480
tgtcaagacc cccacagatt tggtcacaca ccagtacaag caagactcag ctgcctggcc
                                                                     540
aaggacaact ctatctatgt cttggcaaat ttgggggaca aaaagccatg taattcccgt
                                                                     600
660
gaaggaaaac tcgtggcacg ttaccataag taccacctgt actctgagcc tcagtttaat
gtccctgaaa agccggagtt ggtgactttc aacaccgcat ttggaaggtt tggcattttc
                                                                     720
                                                                     780
acgtgctttg atatattctt ctatgatcct ggtgttaccc tggtgaaaga tttccatgtg
                                                                     840
gacaccatac tgtttcccac agcttggatg aacgttttgc cccttttgac agctattgaa
                                                                     900
ttccattcag cttgggcaat gggaatggga gttaatcttc ttgtggccaa cacacatcat
                                                                     960
gtcagcctaa atatgacagg aagtggcatt tatgcaccaa atggtcccaa agtgtatcat
                                                                    1020
tatgacatga agacagagtt gggaaaactt ctcctttcag aggtggattc acatccccta
tectegettg cetacecaac agetgttaat tggaatgeet aegecaceae cateaaacea
                                                                    1080
tttccagtac agaaaaacac tttcagggga tttatttcca gggatgggtt caacttcaca
                                                                    1140
gaactttttg aaaatgcagg aaaccttaca gtctgtcaaa aggagctttg ctgtcattta
                                                                    1200
agctacagaa tgttacaaaa agaagagaat gaagtatacg ttctaggagc ttttacagga
                                                                    1260
ttacatggcc gaaggagaag agagtactgg caggtctgca caatgctgaa gtgcaaaact
                                                                    1320
                                                                    1380
actaatttga caacttgtgg acggccagta gaaactgctt ctacaagatt tgaaatgttc
tccctcagtg gcacatttgg aacagagtat gtttttcctg aagtgctact taccgaaatt
                                                                    1440
catctgtcac ctggaaaatt tgaggtgctg aaagatgggc gtttggtaaa caagaatgga
                                                                    1500
tcatctgggc ctatactaac agtgtcactc tttgggaggt ggtacacaaa ggactcactt
                                                                    1560
tacagctcat gtgggaccag caattcagca ataacttacc tgctaatatt catattatta
                                                                    1620
atgatcatag ctttgcaaaa tattgtaatg ttatagggcg tctctttatc actcagcttc
                                                                    1680
tgcatcatat gcttggctga atgtgtttat cggcttccca agtttactaa gaaactttga
                                                                    1740
agggctattt cagtagtata gaccagtgag tcctaaatat tttttctcat caataattat
                                                                    1800
tttttaagta ttatgataat gttgtccatt tttttggcta ctctgaaatg ttgcagtgtg
                                                                    1860
gaacaatgga aagagcctgg gtgtttgggt cagataaatg aagatcaaac tccagctcca
                                                                    1920
gcctcatttg cttgagactt tgtgtgtatg ggggacttgt atgtatggga gtgaggagtt
                                                                    1980
                                                                    2040
tcagggccat tgcaaacata gctgtgccct tgaagagaat agtaatgatg ggaatttaga
ggtttgtgac tgaattccct ttgacattaa agactatttg aattcaaaaa aaaaaaaaa
                                                                    2100
                                                                    2102
aa
<210> 1361
<211> 1289
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1254)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1285)
<223> n equals a,t,g, or c
<400> 1361
                                                                      60
ggaattcccg ggtcgaccca cgcgtccggg gagctcagcc gagggctgca caaagacctt
```

| aggatggggc ctgctcctct ccaggaagag cgtccctact agctgcaccg cccacactgg tcccacacca gcctcgaggc ccagcctgt cccaagagcc actccagggt ccaaggccat tgggggaccc tgggggaccc gcccagcct acctgtgctc cagcgccagt ctgacagccg caggatgaaa | tgccagtgtc cgctgtgggc ggcgcggagg gaggcggacc gggcccgcgc ctggaggtgt ggagctgccc cactattcc ggtggccgag acagcagggg ctgcaagcct ggagcgatt ggatgtggac tgctgcagg aggagggc cttcctccag cccaggtccc cggcctccc | gctgaggacc ctgggccct gctgtgcaca cagcgggcga cactctgct acagcagggc ccagggacat cgggctctgc aacgtggggc tatgcccgcg aagactgagg aaaaggaggg ctggccctgg agcggcccc agcagcacgt tggagacccc agtgaggccc cgggccgcca gggctccaga aaaaaaaaaa | cctgcctct gcctgccgca ggctgcaggg ccctcagcaa cctgcggcct caccggaccg cggcagctgc tgcagagcg tgaccccggc acccagaacc cgggtgacct tggaaaacgt gcgggctgg tccctgctc gtccccgcc gccgtgagg | gggttctagg ggccgaggac cagtgcgacg gtcggacacc gccagcatgg cagcaccgca tcccggggtc caaagggacc cgctcaggtg caccacagac ggctaccag gtatgagagc gacgcccct cctgccctga ccgcccgcc tccgtgaggt gtctaaataa | gtgctgcgcc gctgtagccc gctgtagccc gcggcggaag agactgcacg atctcctgcg ccctctgcct gggtgcgctg agcctggcgg catcgcagtc gacgtcctgt ccgctggagc accctcccgc atccgggagc gcttccagct acactcaagg tcacagctga cctggccgct agcgccagcg | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1080 1140 1200 1260 1289 |
|--|---|---|---|---|--|--|
| <212> DNA <213> Homo | sapiens | | | | | |
| tgagttatat taggtaggca tctctcttga gctggcctgt tgtctcattg ttaatagtta atcctgcttc cgttggtggt aaaatataga tttgggaggc catggtgaaa ctgtaatccg ggttacagtg ctcaaaaaaa | attgctggaa tttggtacct ctttgaaaat cctgtgaaca tgagtcttt agcagtgtgt actcagtttg agccaaattt aacatacatt cgaggtgggc cccatctct agctacttag | tgaatgtttc gtttaacaac aatggataat taaaatctgg gccgtcttct tgaaagcttt tctaccacca cgcataaatg catagtctac cttggccagg agatcacttg actaaaaata gaggctgagg gcaccactgc gcggccgc | ttctcttgaa ctttcatgat gcactttggg ctaaàtggta taaaatgatg atgcaaataa gttgaggaaa tgtgtgaacc cacagtggcc aggccaagag cmaaaattac catgagaatt | ttccaacagg ggataaatct aatttctgct taataactgc ttgtgtgatc ctcaactgaa actacatcat atcatgattt catgcctgta tttgagacta ccaggtttgg gcttgaacgc | aagcatttgc gccacatcag gtcttaattg atttcagcgc caaatttaaa tgacaattgg aggtgacccc cagaagcact attccaacac gcctgtccaa gggtgcatgc cggaggcaga | 60 120 180 240 300 360 420 480 540 600 660 720 780 840 868 |
| <210> 1363 <211> 2929 <212> DNA <213> Homo | sapiens | | | | | |
| ccrcgcgkcc cgaggagcca agtgcacaga tatgccgctc agaggctgtg gcttcttcat tgtcctacac attacaccga tccaggtccc | ggtcgcgaag tgaggcgca agccaaaaag ctacgaggac gtacttctgg ccggaggcgc caggcagccc cccaggagga acccaactca | gctgcgaagg cattgctggt tgctgtggct ttccttctga atgtacccc ccaaatcccg ccggggatga ccccagggga | acccggcgtc tggcggcgct atttcgaagg ccaggtgctg tgatgggcgt cgccgctgat gcccaggagc accctgtcgg gtgtggcctg | cgggcgcgct gctgctcggg actctatcca tgtgcgggcc gcttttctgc cgaggagcca ccagcagccg gaattccatg cccgcccct | ggagaggacg ctgctcttgg acctattata ctctccatac tgcggagccg gccttcaatg gggccgccct gcaatggctt | 60 120 180 240 300 360 420 480 540 600 660 |

| tacaagagga | gagacaggag | agggcctttc | cctggccttt | ctgtcttcgt | tgatgttcac | 720 |
|------------|--------------------------|---|--------------|--------------|--------------|-------------|
| ttccaggaac | aatctcataa | gctgctaagg | gcagttcctc | tgatatecte | acaycaayca | 780 |
| carctctctt | tcaggettte | catggagtac | aatatatgaa | ctcacacttt | gicilities | 840 |
| ttacttctat | ttctgacgca | tctatactct | cacatggtag | tgtggtgaca | greecegagg | 900 |
| actascatec | ttacqqtqqc | gtgaccagat | ctacaggaga | gagactgaga | ggaagaaggc | 960 1020 |
| agtactagag | atacaaataa | catgtagagg | ggccaggccg | agcateceay | gcaagcaccc | 1020 |
| ttctacccaa | gtattaatag | gaagccccat | gccgggcggc | teageegatg | aaycaycayc | 1140 |
| cgactgaggt | gagcccagca | ggtcatctgc | tccagcctgt | cctctcgtca | geetteetet | 1200 |
| tccagaagct | gttggagaga | cattcaggag | agagcaagcc | ccttgtcatg | LLLCLGLCLC | 1260 |
| tgttcatatc | ctaaagatag | acttctcctg | caccgccagg | raagggtagc | acgigeagei | 1320 |
| ctcaccgcag | atggggccta | gaatcaggct | tgcttggagg | cctgacagtg | tangagatta | 1380 |
| cactaagcaa | atttatttaa | attcatggga | aatcacttcc | tgccccaaac | theatatat | 1440 |
| cattttgtga | gctcttggtc | tgatttggag | aaaggactgt | racecatttt | atatattaca | 1500 |
| ttatggaagt | gcatgtagag | cgtcctgccc | tttgaaatca | gactgggtgt | ctcaddcadc | 1560 |
| tggacatcac | tgcctctcca | gggcattete | aggeeegggg | geteteete | ggaagtcaca | 1620 |
| tccagtggtg | ggttctgaag | ggtgctttca | aaacygggca | tetaagatta | tattagatet | 1680 |
| tggactcttc | cagggagaga | gaccagctga | ggegeeteee | addagagag | aggagaagta | 1740 |
| aagcgggtgt | gtgctgggct tgcactgacc | atattatat | aattagaata | aagaagaagt | ggtcggaaat | 1800 |
| ctgactcaac | ggataggaat | cacacctcac | cccaggatet | cacaggtagt | ctcctgagta | 1860 |
| gcacattcct | agcggggagc | tacttcccc | gcatagttat | agtgttgatg | tgtgaacgct | 1920 |
| gttgacggct | gtgtgctaag | agetatgeag | cttagctgag | gcgcctagat | tactagatgt | 1980 |
| gacctgtcct | ggggaatgag | atagaatac | ttatttttta | atgaactaat | cagagcctct | 2040 |
| tanganatta | ttactcattg | aactggagca | tcaagacatc | tcatggaagt | ggatacggag | 2100 |
| tgagaaaccg | tccatgcttt | tcactctgag | gacatttaat | cggagaacct | cctggggaat | 2160 |
| tttataggeg | acacttggga | acaaaacaga | caccctggga | atgcagttgc | aagcacagat | 2220 |
| actaccacca | gtgtctctga | ccaccctqqt | gtgactgctg | actgccagcg | tggtacctcc | 2280 |
| catactacaa | gcctccatct | aaatgagaca | acaaagcaca | atgiteacig | LLLacaacca | 2340 |
| agacaactgc | gtgggtccaa | acactcctct | tcctccaggt | catttgttt | gcattttaa | 2400 |
| tatattatt | ttttgtaatg | aaaaagcaca | ctaagctgcc | cctggaatcg | ggtgcagctg | 2460 |
| aataggcacc | caaaagtccg | tgactaaatt | tcgtttgtct | ttttgatage | adattatytt | 2520 |
| aagagagagt | gatggctagg | gctcaacaat | tttgtattcc | catgtttgtg | Lyayacayay | 2580 |
| tttatttcc | cttgaacttg | gttagaattg | tgctactgtg | aacgctgatc | ctgcatatgg | 2640 |
| aagtcccrct | teggtgacat | ttcctggcca | ttcttgtttc | cattgtgtgg | acggcgggcc | 2700 |
| atacccactt | cctggagtga | gacageteet | ggtgtgtaga | attcccggag | egreegryge | 2760 |
| tragagtaaa | cttgaagcag | atctgtgcat | gcttttcctc | tgcaacaatt | ggetegtete | 2820 |
| tctttttqt | tctcttttga | taggatcctg | tttcctatgt | gtgcaaaata | aaaataaatt | 2880 |
| tgggcaaaaa | a aaaaaaaaaa | aaaaaaaaa | aaaaaaaaaa | aaaaaaaag | | 2929 |
| | | | | | | |
| <210> 1364 | 1 | | | | | |
| <211> 1141 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| 100 | • | | | | | |
| <400> 1364 | ± | , ,+,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | antacctaca | ctcagaggg | cttcagtgct | 60 |
| cttcagggca | a acaggerggg | acceaggeas | ggtgtttgt | tatacacat | tcccgtcact | 120 |
| gagggcggc | tgetgteegt | geteteteet | . dactadaec | ccacacacaca | aggaaacact | 180 |
| cctcgatgt | e acateagagt | : ataacttott | . taccadadaa | cctctcctgt | ggccatgcct | 240 |
| ttaccagag | c adacyayacı | . acaactege | acattggtgc | ttggacaccc | gtccttcggg | 300 |
| gaacetete | e egggacegee | , taaaatqqaq | acagtcggt | acatatatt | gccgattgga | 360 |
| aggggagga | a dayeyyeeyy | taccaatcac | tocacagaca | tttccagggg | cccttcccca | 420 |
| accetattt | a atagcactas | cctcaggcag | ctgggcccc | gggacagca | ccaggggact | 480 |
| accetaace | c tagatagcas | ccqqqaccgg | g ctcacaagct | tctgtttgga | a geageteige | 540 |
| taacaacca | c cogcetecae | togagatat | g acacgactct | ttcttgcctg | ccaaacgttc | 600 |
| tctgattct | t togatcated | , atcctaacac | c agcaaaggcg | g gtattgttgd | gigedellea | 660 |
| aggttaatg | c aggatcagaa | a aagtctaato | c atttctctgt | : ggtttttgg | a atttccaaag | 720 |
| adcacccad | a tittaaccci | cagtcctcgg | g ggttgtccgg | g ctgcggctg | gergerging | 780 |
| agcattaag | c tcattccact | tcacatgtaa | a acttgtttct | t atgcattca | c ctcctgggag | 840 |
| actccacat | t cctgagagaa | a ctgcatggt | t atgaactct1 | t actcgtgtg | c actaaagtgc | 900 |
| acgtgctgt | g tgtgtactga | a ccctctgcc | c tgtgggagc | c acgtgctgt | g gggagaacag | 960 |
| | | | | | | |

| agcctatact | gatgggactc tctggcactt ctgggcaaca | tgggaggctg | tggcaggagg | atcacttgag | gccaggaatt | 1020 1080 1140 1141 |
|---|---|---|---|--|---|--|
| <210> 1365 <211> 1285 <212> DNA <213> Homo | sapiens | | | | | |
| aactagtgga attttagtat agaaatcagt cacagacatc gaggcaggga gtcccatctc gttctcagct tcatccttga gcttttgggg gtaaggagag tctccttcca aactttaaga gcgcccggcc gattatgcc aaaataccag cttcatctgt gaaattttta tgattttta atgtattatg atcacaaatg | cactaaaggg tcccccgggc ctcaaatgct aaaccttgta ctcacctttc tggaggtagc aagggttcca tctgaccaga tactggttgt ctgggtctga ggaacggagt cttttcctcc tgagttggtc acattcagtt aatattaagt ctgatgaagg tcagtcatct aaggagtaga aagtgtgttt attaaatctg tgaagttatg aaaaaaaaaa | tgcaggtttt ttaaagtgag agatgctca tgttccctca aggatggcgt taaaaatcac agctcctagg gtcatctcag ctttgcatct cagttcaggg cagcagattg actggaaagg cttatcaaag aaaaatata catcttaggc ccaaaaacag ataccaaatg ctttctaaat aggcagatga catgatgtaa | aatgtttcga tggaattttg acaaaaaatg gaatcgggtt gggtgggatt ctttttggtc aagaactggc acccacgggt gattgctctg atattcttgc gactcattgg agtttgctgg aaataaccca agaaaaggtt aaataccag taaaaataac atagaaacag tgctgttcct gcttacaagt | agatggttgt actgtacagt gggttgattc cctgtgaggc agcaagtctc ctatattggg tggtcacgac tagtatggta ggcctgtcat cagaaaatct cgctctcatg gattacaggc gacttaatct atcttaaata ctgatgaagg cactttttgt actgcctgaa taatttgatt attgaaataa | aaagaggaaa tccttctagc cttggcactt tgggtagtgg ggagtctgtt aacttgtgtg tccttaagct gcttcactgg tagcatcct ggggtcgaaa ttgaatttca gtgagccact tgaatgatac gatcttaggc catctgatgc tgggcaatat ttgagaattt aatttaattc ttactaatta | 60 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1080 1140 1200 1260 1285 |
| <210> 1366 <211> 1796 <212> DNA <213> Homo | sapiens | | | | | |
| aattcggcag gatgatccat ggtgcacgtc tcgcaagaag tattatctgg tttcaagggc tatatcagaa tcgtgaccta aattaactta tactgaaaat ttgtctttta tctggtaccc atttaacatt gcactatatt tctatctgag cattatctgc | gtggccatca ctggaggctg gaccagggtg gaaagagcca atgtgtatcc ctagtttata aagtgcttgt cgtcctgtaa tggagacagt tgtggatttt tccattctag tgtatataca agtatattgga ttatttgaa taattggaag ctggtcagtt | acattttgga atctgattga ctgaacagtt tggtgcttgt aaacgaatga tgaagtcttg tcatttagtt aattatcaat gcttcctctt atattcttgt aaatttacct agtctgtcag tttctagaag gtaaaatatt actggagtac cacagcagtt | tgtcaatcag tagcatagaa acagcgagct cctgtcagtg ttgcctccga ccagaacaaa agaaactaac ttattgattc gtattctgat tttgacaaat ttttactagc aaactctata cctattctct gtacatgtga atgttactaa catcctcatc | atatttaaag gccaatgtgg gcttactatc attattctaa tcgttctccc ctgatcacaa tactaactag tattgatttc tgcccttcat gacactacag atctgaagat ataggccacc atctattttg tccagagtaa tctgggtta cacactaagc | atttggccat aaagctcaga agaaaaaatc tcttgggact gctgagctgt gaagacagca tctttggaat tcaaattagg cccaagtgtt tctcgtaata agagttactt agttttatt aaagattttg atgagaagtc aagtttactt catcctgtta | 60 120 180 240 300 360 420 480 540 660 720 780 840 900 960 1020 |
| tgtctgcata tgggaatgat | gaagttaatt gaaaggcaga ttaatcttgt gaatgttgct | attagacata tgttgttgtt | gcatgctttg gttgttgttc | gaaaagcaaa acttgtggtt | taggaattgt ctacattcct | 1080 1140 1200 1260 |

```
tttgaaggca ggaagatttt taaagataga ttgaggttgg tttaaaaatta ttcctgtaaa
                                                                   1320
                                                                   1380
ccaacaataa agcaaagaag aggttcattt ttgtaaataa cactggtttc aaatagtgat
                                                                   1440
gttagactta acctaattta taaacaagag attaatatct ccatgcatag ttttagacaa
                                                                   1500
aaaaagatgt ttcaataaaa ttactgtctt gtaatataaa tgttgtccac ttcccttttc
cacaggccta gaacagttaa agggaacata atttgtttag gctcccacat aaatgtgaat
                                                                   1560
ctggccaaca actttggttc atcctttagt gaattagagg atttggctac cctgagtata
                                                                   1620
1680
atgtgaacag tagggaagca agggcccaaa tgcataagtt tctttgcact gttgcactta
                                                                   1740
                                                                   1796
cttaatacaa ataaatgttt tttaaagctt taaaaaaaaa aaaaaaaaa aaaaaa
<210> 1367
<211> 770
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (745)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (761)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (770)
<223> n equals a,t,g, or c
<400> 1367
                                                                     60
ggcacgaggc ttgacactca tagtcccatg gagtcaggga tggacaagac agagggacca
                                                                    120
gagataaagg aacccaggcg gaggttgcag tgagctgaga tcatgccact gcactccagc
                                                                    180
ctgggcaaca agagcaaaac ttgatagctt tgcataggga aagagggcat tgatgctggg
                                                                    240
gttttgaaag gtgagtagga gtccatcagg caaaaaaagt atgtattaat tcgaagtatt
                                                                    300
aaacatccct agccacccc attgggaaag atgtgccact gatttgcgag gcgggaggcg
ggggccagac ttgggaatat gtgcagccct ttctgggctg gaaccagggt gcatgggttg
                                                                    360
                                                                    420
gggtagctgc tgggaatatg ccccctgtc ttgctttgtg cagaaaccct tggaagatca
gacccagctc cttacccttg tctgccagtt gtaccagggc aagaagccgg atgtctgccc
                                                                    480
ttcctcaacc agctccctca ggagtgtttg cttcaagtga tggccggtga gctgcggaga
                                                                    540
gctcatggaa ggcgagtggg aacccggctg cctgcctttt tttctgatcc agaccctcgg
                                                                    600
cacctgctac ttaccaactg gaaaatttta tgcatcccat gaagcccaga tacacaaaat
                                                                    660
                                                                    720
tccaccccat gatcaagaat cctgctccac taagaatggt gctaaagtaa aactagttta
                                                                    770
ataaraaaaa aaaaaaaaa aaacncgggg gggggcccgg nacccaattn
<210> 1368
<211> 1444
<212> DNA
<213> Homo sapiens
<400> 1368
gaattcggca cgaggaagaa tctgagagaa acctgacgca gggagcatgg gtatctggac
                                                                      60
ctcaggcact gatatcttcc taagtctttg ggagatttac gtgtctccaa gaagccccgg
                                                                     120
atggatggac tttatccagc atttgggagt ttgctgtttg gttgctctta tttcagtggg
                                                                     180
cctcctgtct gtggccgcct gctggtttct gccatcaatc atagcggccg ctgcctcctg
                                                                     240
gattatcacg tgtgttctgc tgtgttgctc caagcatgca cgatgtttta ttcttcttgt
                                                                     300
ctttctctct tgtggcctgc gtgaaggcag gaatgctttg attgcagctg gcacagggat
                                                                     360
cgtcatcttg ggacacgtag aaaatatttt tcacaacttt aaaggtctcc tagatggtat
                                                                     420
gacttgcaac ctaagggcaa agagcttttc catacatttt ccacttttga aaaaatatat
                                                                     480
tgaggcaatt cagtggattt atggccttgc cactccacta agtgtatttg atgaccttgt
                                                                     540
ttcttggaac cagaccctgg cagtctctct tttcagtccc agccatgtcc tggaggcaca
                                                                     600
```

<220>

| actasatasa | agcaaagggg | aagteetgag | catcttatac | cagatggcaa | caaccacaga | 660 |
|-------------------------|--------------------------|------------|------------|------------|------------|------------|
| getatatgae | tccctgggtc | agaagctact | tgcctttgca | aggetttege | tcgtcctgct | 720 |
| taacactaac | ctcttcatga | agcgatttt | gggcccttgt | ggttggaagt | atgaaaacat | 780 |
| ctacatcacc | agacaatttg | ttcagtttga | tgaaagggag | agacatcaac | agaggccctg | 840 |
| tatactccca | ctgaataagg | aggaaaggag | gaaattcatt | tctggcttcc | agtcctgaaa | 900 |
| atgattagga | agaagcaaat | ggacatggca | agtgcagaca | agtcatgaga | gaccccgact | 960 |
| actcctcagc | cacatcgcac | caacaattct | cttcaggtct | aggatggcag | tcactattca | 1020 |
| taccagataa | tagagaacta | tgtgacgcag | tcctctcagg | agtctgagtt | tacagagcca | 1080 |
| acttgcagca | cctggttatg | cctcctttca | tctcaaagcc | aaagagctgc | caggtaaatg | 1140 |
| gttatgtggt | ctatgttcca | aacaaaccac | atgatcttgc | ctgtgtcaca | atgtaacaag | 1200 |
| actctagctg | ggtcccctgg | tgatgagttt | cagcatagaa | taatgttcaa | ggaaaagaaa | 1260 |
| acgaaaacag | tttaaatctc | taccacagcc | tcacaagcaa | atgctaaggg | gaacatacat | 1320 |
| gtaaaaagcc | agcaaactat | cttcaaactc | ttccgtcctt | aatgtcttcc | atggctattg | 1380 |
| ccccacaat | ggtctctttt | ctccctgctc | ccttattaaa | gaactctttc | tgaaaaaaaa | 1440 |
| aaaa | | | | | | 1444 |
| | | | | | | |
| <210> 1369 | | | | | | |
| <211> 1892 | | | | | | |
| <212> DNA <213> Homo | ganione | | | | | |
| <213> HOIIIO | saprens | | | | | |
| <400> 1369 | | | | | | |
| attcggcacg | aggaaacctg | ctgctttcac | agaggaaggc | atttgctggc | tttcccaagg | 60 |
| caagaacaat | gaaaacaaag | tcatgaggag | ttctctctac | ctcaaatgaa | ggccgcagct | 120 |
| cctqctcaag | ctattttggc | agtctgagag | aacagtacat | tctgaaccac | attgacgcag | 180 |
| ggagcatggg | tatctggacc | tcaggcactg | atatcttcct | aagtctttgg | gagatttacg | 240 |
| tgtctccaag | aagccccgga | tggatggact | ttatccagca | tttgggagtt | tgctgtttgg | 300 |
| ttgctcttat | ttcagtgggc | ctcctgtctg | tggccgcctg | ctggtttctg | ccatcaatca | 360 |
| tagcggccgc | tgcctcctgg | attatcacgt | gtgttctgct | gtgttgctcc | aagcatgcac | 420 |
| gatgttttat | tcttcttgtc | tttctctctt | gtggcctgcg | tgaaggcagg | aatgctttga | 480 |
| ttgcagctgg | cacagggatc | gtcatcttgg | gacacgtaga | aaatatttt | cacaacttta | 540 |
| aaggtctcct | agatggtatg | acttgcaacc | taagggcaaa | gagettttee | atacattttc | 600 |
| cacttttgaa | aaaatatatt | gaggcaattc | agtggattta | tggccttgcc | actccactaa | 660 720 |
| gtgtatttga | tgaccttgtt | tcttggaacc | agaccctggc | agtetetett | atattataga | 780 |
| gccatgtcct | ggaggcacag | ctaaatgaca | gcaaagggga | agteetgage | gcctttgcac | 840 |
| agatggcaac | aaccacagag | gtgttgteet | tattaataa | gaagetaett | gaccattata | 900 |
| ggctttcgct | cgtcctgctt tgaaaacatc | tagatgagge | gagaatttgt | tcactttcat | ggcccccgcg | 960 |
| gttggaagta | gaggccctgt | atactacca | traataarra | daaaadaad | aaaaacaagg | 1020 |
| gacatcaaca | attatccatg | attetteett | taatatatct | gratttgaac | ccaactgtat | 1080 |
| aactcaagat | aaattccttc | tatctgagac | ctagattect | ctcagtgtta | ttcttttgat | 1140 |
| attactcatc | ctgggactgt | tatectat | ccttatgcaa | cttaaaatcc | tggtgtcagc | 1200 |
| atctttctac | cccagcataa | agaggaagcg | catccaatat | ctgcatgcaa | agctgcttaa | 1260 |
| aaaaagatca | aagcagccgc | tgggagaagt | caaaagacgg | ctgagtctct | atcttacaaa | 1320 |
| gattcatttc | taacttccaa | tcctgaaaat | gattaggaag | aagcaaatgg | acatggcaag | 1380 |
| tacagacaag | tcatgagaga | ccccgactac | tcctcagcca | catcgcacca | acaattctct | 1440 |
| tcaggtctag | gatggcagtc | actattcatg | ccggataata | gagaactatg | tgacgcagtc | 1500 |
| ctctcaggag | tctgagttta | cagagccaac | ttgcagcacc | tggttatgcc | tcctttcatc | 1560 |
| tcaaagccaa | agagctgcca | ggtaaatggt | tatgtggtct | atgttccaaa | caaaccacat | 1620 |
| gatcttgcct | gtgtcacaat | gtaacaagac | tctagctggg | tcccctggtg | atgagtttca | 1680 |
| gcatagaata | atgttcaagg | aaaagaaaac | gaaaacagtt | taaatctcta | ccacagcctc | 1740 |
| acaagcaaat | gctaagggga | acatacatgt | aaaaagccag | caaactatct | tcaaactctt | 1800 |
| | | | | tctcttttct | ccctgctccc | 1860 |
| ttattaaaga | actctttctg | aaaaaaaaaa | aa | | | 1892 |
| .010 1370 | | | | | | |
| <210> 1370 | | | | | | |
| <211> 2509 <212> DNA | | | | | | |
| <212> DNA <213> Homo | ganiene | | | | | |
| -213/ HOMO | Supremo | | | | | |

```
<221> SITE
<222> (617)
<223> n equals a,t,g, or c
<400> 1370
ggcacgagca ttttcactgt atatcatggt atcttaatga tgtatataat tgccttcaat
                                                                       60
ccccttctca ccccaccctc tacagcttcc cccacagcaa taggggcttg attatttcag
                                                                      120
                                                                      180
ttgagtaaag catggtgcta atggaccagg gtcacagttt caaaacttga acaatccagt
tagcatcaca gagaaagaaa ttctcctgca tttgctcatt gcaccagtaa ctccagctag
                                                                      240
taattttgct aggtagctgc agttagccct gcaaggaaag aagaggtcag ttagcacaaa
                                                                      300
ccctttacca tgactggaaa actcagtatc acgtatttaa acatttttt ttcttttagc
                                                                      360
catgtagaaa ctctaaatta agccaatatt ctcatttgag aatgaggatg tctcagctga
                                                                      420
                                                                      480
gaaacgtttt aaattctctt tattcataat gttctttgaa gggtttaaaa caagatgttg
ataaatctaa gctgatgagt ttgctcaaaa caggaagttg aaattgttga gacaggaatg
                                                                      540
gaaaatataa ttaattgata cctatgagga tttggaggct tggcatttta atttgcagat
                                                                      600
aataccctgg taattcncat gaaaaataga cttggataac ttttgataaa agactaattc
                                                                      660
                                                                      720
caaaatggcc actitgticc tgtctttaat atctaaatac ttactgaggt cctccatctt
                                                                      780
ctatattatg aattttcatt tattaagcaa atgtcatatt accttgaaat tcagaagaga
                                                                      840
agaaacatat actgtgtcca gagtataatg aacctgcaga gttgtgcttc ttactgctaa
ttctgggagc tttcacagta ctgtcatcat ttgtaaatgg aaattctgct tttctgtttc
                                                                      900
                                                                      960
tgctccttct ggagcagtgc tactctgtaa ttttcctgag gcttatcacc tcagtcattt
                                                                     1020
cttttttaaa tgtctgtgac tggcagtgat tctttttctt aaaaatctat taaatttgat
                                                                     1080
gtcaaattag ggagaaagat agttactcat cttgggctct tgtgccaata gcccttgtat
                                                                     1140
gtatgtactt agagttttcc aagtatgttc taagcacaga agtttctaaa tggggccaaa
                                                                     1200
attcagactt gagtatgttc tttgaatacc ttaagaagtt acaattagcc gggcatggtg
                                                                     1260
gcccgtgcct gtagtcccag ctacttgaga ggctgaggca ggagaatcac ttcaacccag
gaggtggagg ttacagtgag cagagatcgt gccactgcac tccagcctgg gtgacaagag
                                                                     1320
                                                                     1380
agacttgtct ccaaaaaaaa agttacacct agggtgtgaa ttttggcaca aaggagtgac
                                                                     1440
aaacttatag ttaaaagctg aataacttca gtgtggtata aaacgtggtt tttaggctat
                                                                     1500
qtttqtqatt gctgaaaaga attctagttt acctcaaaat ccttctcttt ccccaaatta
                                                                     1560
agtgcctggc cagctgtcat aaattacata ttccttttgg tttttttaaa ggttacatgt
tcaagagtga aaataagatg ttctgtctga aggctaccat gccggatctg taaatgaacc
                                                                     1620
tgttaaatgc tgtatttgct ccaacggctt actatagaat gttacttaat acaatatcat
                                                                     1680
acttattaca atttttacta taggagtgta ataggtaaaa ttaatctcta ttttagtggg
                                                                     1740
cccatgttta gtctttcacc atcctttaaa cttgctgtga atttttttgt catgacttga
                                                                     1800
                                                                     1860
aaqcaaqqat agagaaacac tttagagata tgtggggttt tttaccattc cagagcttgt
gagcataatc atatttgctt tatatttata gtcatgaact cctaagttgg cagctacaac
                                                                     1920
caagaaccaa aaaatggtgc gttctgcttc ttgtaattca tctctgctaa taaattataa
                                                                     1980
gaagcaagga aaattaggga aaatatttta tttggatggt ttctataaac aagggactat
                                                                     2040
aattettgta cattatttt catetttget gtttetttga geagtetaat gtgecacaca
                                                                     2100
attatctaag gtatttgttt tctataagaa ttgttttaaa agtattcttg ttaccagagt
                                                                     2160
agttgtatta tatttcaaaa cgtaagatga tttttaaaag cctgagtact gacctaagat
                                                                     2220
ggaattgtat gaactaatga tctggaggga ggggaggatg tccgtggaag ttgtaagact
                                                                     2280
tttatttttt tgtgccatca aatataggta aaaataattg tgcaattctg ctgtttaaac
                                                                     2340
                                                                     2400
aggaactatt ggcctccttg gccctaaatg gaagggccga tattttaagt tgattatttt
                                                                     2460
attgtaaatt aatccaacct agttcttttt aatttggttg aatgtttttt cttgttaaat
                                                                     2509
gatgtttaaa aaataaaaac tggaagttca aaaaaaaaa aaaaaaaaa
<210> 1371
<211> 2101
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (247)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2007)
```

```
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2024)
<223> n equals a,t,g, or c
<400> 1371
                                                                      60
tcgacccacg cgtccgccca cgcgtccggg acgccggcgg agacgcgggc gagtggttag
caggaagaag atgagcctta agtctgaacg ccgaggaatt catgtggatc aatcggatct
                                                                     120
cctgtgcaag aaaggatgtg gttactacgg caaccctgcc tggcagggtt tctgctccaa
                                                                     180
gtgctggagg gaagagtacc acaaagccag gcagaagcag attcaggagg actgggagct
                                                                     240
                                                                     300
ggcggancga ctccagcggg aggaagaaga ggcctttgcc agcagtcaga gcagccaagg
360
ggttaccaca gtgaagaaat tcttcagtgc atcttccagg gtcggatcaa agaaggaaat
                                                                     420
                                                                     480
tcaggaagca aaagctccca gtccttccat aaaccggcaa accagcattg aaacggatag
agtgtctaag gagtkcakag aatttctcaa gaccttccac aagacaggcc aagaaatcta
                                                                     540
                                                                     600
taaacagacc aagctgtttt tggaaggaat gcattacaaa agggatctaa gcattgaaga
acagtcagag tgtgctcagg atttctacca caatgtggcc gaaaggatgc aaactcgtgg
                                                                     660
gaaagtgcct ccagaaagag tcgagaagat aatggatcag attgaaaagt acatcatgac
                                                                     720
tcgtctctat aaatatgtat tctgtccaga aactactgat gatgagaaga aagatcttgc
                                                                     780
cattcaaaag agaatcagag ccctgcgctg ggttacgcct cagatgctgt gtgtccctgt
                                                                     840
taatgaagac atcccagaag tgtctgatat ggtggtgaag gcgatcacag atatcattga
                                                                     900
aatggattcc aagcgtgtgc ctcgagacaa gctggcctgc atcaccaagt gcagcaagca
                                                                     960
catcttcaat gccatcaaga tcaccaagaa tgagccggcg tcagcggatg acttcctccc
                                                                    1020
                                                                    1080
caccctcatc tacattgttt tgaagggcaa cccccacgc cttcagtcta atatccagta
                                                                    1140
tatcacgcgc ttctgcaatc caagccgact gatgactgga gaggatggct actatttcac
                                                                    1200
caatctgtgc tgtgctgtgg ctttcattga gaagctagac gcccagtctt tgaatctaag
tcaggaggat tttgatcgct acatgtctgg ccagacctct cccaggaagc aagaagctga
                                                                    1260
                                                                    1320
gagttggtct cctgatgctt gcttaggcgt caagcaaatg tataagaact tggatctctt
gtctcagttg aatgaacgac aagaaaggat catgaatgaa gccaagaaac tggaaaaaga
                                                                    1380
                                                                    1440
cctcatagat tggacagatg gaattgcaag agaagttcaa gacatcgttg agaaataccc
                                                                    1500
actggaaatt aagcctccga atcaaccgtt agcagctatt gactctgaaa acgttgaaaa
                                                                    1560
tgataaactt cctccaccac tgcaacctca agtttatgca ggatgatcac aatttagtgg
                                                                    1620
agagtattta tttgagccta aattgtaggt agcccttact acactcaact gattgggatc
                                                                    1680
tagaatgtaa ctaaattgct tataaatgtc agagcatttt ttaaaggtac agtatatggg
                                                                    1740
gattgtttcg tttttcctag caggggaacc ttagttaata ataaaatact acttatttga
                                                                    1800
gttactgata cagattcatt taaggettgt gtgcaaattt tgtctcaatc ttttttccct
                                                                    1860
ccatgatttt cctatgtgct tcctctggca ttcactgtgg ttttggtaaa taattgcctt
                                                                    1920
ttaaaqqatt aaacaaatga atgctacaaa gtgtatgttc aagaaaatta aatggtacca
                                                                    1980
ctcttccaca gtttggaata attttataat tgtaaagata gaaattatat tgatargtaa
                                                                    2040
atatqtaaaa ttqtaaatat gtaaaanaaa gaatggtgtc tgcngtgcat ggcattttat
atgttaattt tttagtttaa aatgaagtat attgaatgtt ttgcctttag cacccatttt
                                                                    2100
                                                                    2101
<210> 1372
<211> 1322
<212> DNA
<213> Homo sapiens
<400> 1372
                                                                      60
cgggcaaagg cgccctggac cctggcgaag gacgcttgcc gccgagcgga ctgattcgca
gagtetgtae atagtgtata ttgetetaec eggyegeaca ceaegteetg etetggettt
                                                                     120
tgccttcttg atgccagcct gctgcaacag accctccccg cgcccctccc cagcccatct
                                                                     180
tactgcaagc agcgtcctga ggagacagcg gcacgttcta gctgcgtctg cggccagccc
                                                                     240
gtgccagtgg agtgggctcc gcgttgctca ttctctccga caggttgtca gcctctgtcc
                                                                     300
ccgctgcaca gggtcttgcc ccttctccgg ggcctgtgcc agctcccttc cctccccgtt
                                                                     360
stcctgtccc cacagccatt ctgggagctg gggaacctgg tctcaaggca ggccctgcag
                                                                     420
ttccacagag gtggcaggtc ttgccctttg gccaacagat ttcttgtcct gccttctaga
                                                                     480
tgcctctgag ctccaaaccc agggcagcca tggcttctca tttacaccaa caggtttcag
                                                                     540
                                                                     600
ttccaacaga aaggtcgggg taggttcgtg cagagatggg gctggcaggg gggctatggg
```

```
aggattattt taacagatca agaaaatgaa gccaaatcaa gtgaattaaa ttcctcacaa
                                                                    660
ttattttctt tccctgaggt ttgattggca cagcagcaaa agttgaggcc accccacttg
                                                                    720
tgtccactgt ttttagaaaa aaatgaatgg cttcctgcca ttgtggggct ggactcttgg
                                                                    780
                                                                    840
gctttcttgg tgggagcgga gaaggggcct cccacccttg tccgagttgc ctcccactgg
                                                                    900
aggtcaggag tctacactgc agcctcgggc actgtgggga gtgcatgcct ggggcctctg
                                                                    960
ggtggggacc atggacaggc cctggtcact gtcctaacct ttgtcaggac aaaggtagca
                                                                   1020
agaggatttc ctggcgggtg ggaaggaatg gctggggcgg ccagttttga cacgccccag
tgccctggag aacaaccagg gtcatctgca cttgatgact gctccccgac ccccagcccg
                                                                   1080
                                                                   1140
gacaceteat teceeteeca etacagggat caagtgaeet gggaagaace gagttyaaca
ccaggatgtg tttccttaga tttcctttcc taggcgattt ccagggagag ccctgattgg
                                                                   1200
                                                                   1260
acaatcacat cacagatcac actgcagttt ccatgttagc actgtggatg ggtttttaat
1320
                                                                   1322
<210> 1373
<211> 1111
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (115)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1095)
<223> n equals a,t,g, or c
<400> 1373
ageggeagte gggtgggaag eegtgteteg eagtegtgga etegtgeage tggggegtey
                                                                      60
                                                                     120
gcakscgctc gtmacccgcg tratgctgtt tctggcgttg ggcagcccgt gggcngtcga
                                                                     180
actgmctctc tgcggaagga ggactgcatt gtgtgcggcc gccgcgctcc gaggtccccg
ggcctctgtc tcccgggcgt cctccagcag cgggccttcg gggccggtag ccggctggag
                                                                     240
                                                                     300
tacggggcct tcgggagccg cgcgccttct ccggcgtccg ggtcgagcgc agatccctgt
ttattgggaa ggatatgttc gattcttaaa tacgccatct gacaaatcag aagatggaag
                                                                     360
gctaatttat actggcaata tggcccgagc agtgtttggt gtgaaatgtt tctcttattc
                                                                     420
tacgagtctg attggcctta catttctgcc atacattttt acacaaaata atgctatttc
                                                                     480
                                                                     540
tgaaagtgtg cctctgccta ttcaaatcat attctatggc atcatgggaa gctttacggt
gatcacccca gtgctgcttc actttattac aaaaggctat gtcattcgat tgtaccatga
                                                                     600
ggccacaaca gacacttata aagccattac ctacaatgct atgcttgcag aaacgagtac
                                                                     660
agtgtttcac cagaatgatg tgaagattcc agatgctaaa catgtattta ccacatttta
                                                                     720
tgctaaaaca aaatcactgt tagttaatcc agtgctcttt ccaaaccgtg aagactatat
                                                                     780
ccatctaatg ggttatgaca aagaagaatt tattttgtat atggaagaar ccagtgaaga
                                                                     840
gaaacggcat aaagatgasa aatgagccta tttgttagtg ttcgtgctya aatgtgattt
                                                                     900
                                                                     960
acgttttaat gtataataat aaaattgcct tttgcattcc gttagtgact gattgttaaa
aataatttga aattatcaaa gcttttaatt tccagagaat gatgtttgtt tataataaaa
                                                                    1020
caagctatgt ttgaaaacca aaatgtagta tctaccattc gtgttttaga aaggtatgtg
                                                                    1080
                                                                    1111
aataaatatg ttctntgaag atcggactgg t
<210> 1374
<211> 1514
<212> DNA
<213> Homo sapiens
<400> 1374
gctgcaggaa ttcggcacga ggcagcatct gggctgatgg gccgtaccct gcaccgtgag
                                                                      60
ccacccgcag gagaccagga gggcacagca ctgcacctgc agacaagcct gccagccctt
                                                                     120
                                                                     180
tctgaggcag atacccagga actaacccag atcctgagga ggatgaaggg gctggccctg
gaggccgaga gtgagctgga gagacaagac gaagccctgg atggcgttgc agcagctgtg
                                                                     240
gacagggcaa ccttgaccat cgacaagcac aacaggcgga tgaagaggct gacctagggg
                                                                     300
```

```
360
cagaacgtcc ctgcattcct gtctcaccct gcacatcccg ctgagatgga gggctgggcg
                                                                     420
gcagtgccag ggctgcagag gcctgtggcc ctccggagtg gtcttcctct ggatgggct
                                                                     480
gctactgtgg ggctgcttct gcaccagggg cctccccagg tgtgcaccat gcctgcctcc
cacttggctg tccctgctgc tgggcaggac ccggccacat gttctgcgga tgctgcagaa
                                                                     540
gtgtggacca tggcgggacc ccaaggacac ttggcacagg cctggaagag gccgccctcg
                                                                     600
tcttgtctcg gctccctttc atggacagac tggccttctt agctgtacta taaatttgtg
                                                                     660
agtgaagtta gagcccagct cacttagcca gctcactttg agggcatcct ataaacaccc
                                                                     720
aactgttctt ttatcgtctc ggttttagcc aaaagtgaaa ttagcatgac tgcatctttc
                                                                     780
                                                                     840
aaacaaaaat attgatttct gcttttaggg ccccgtttcc atccagaaat aaagggaaat
gctggctaaa aaaaaaaaa aaaaactcga ggtcgacggt atcgataagc ttgatatcga
                                                                     900
attcggcacg aggtgaaatt gacctgcccg tgaagaggcg ggcatgacac agcaagacga
                                                                     960
                                                                    1020
gaagacccta tggagcttta atttattaat gcaaacagta cctaacaaac ccacaggtcc
                                                                    1080
taaactacca aacctgcatt aaaaatttcg gttggggcga cctcggagca gaacccaacc
tccgagcagt acatgctaag acttcaccag tcaaagcgaa ctactatact caattgatcc
                                                                    1140
                                                                    1200
aataacttga ccaacggaac aagttaccct agggataaca gcgcaatcct attctagagt
                                                                    1260
ccatatcaac aatagggttt acgacctcga tgttggatca ggacatcccg atggtgcagc
                                                                    1320
cgctattaaa ggttcgtttg ttcaacgatt aaagtcctac gtgatctgag ttcagaccgg
                                                                    1380
agtaatccag gtcggtttct atctacttca aattcctccc tgtacgaaag gacaagagaa
                                                                    1440
ataaggccta cttcacaaag cgccttcccc cgtaaatgat atcatctcaa cttagtatta
                                                                    1500
1514
aaaaaaaaa aaaa
<210> 1375
<211> 2799
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (2794)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2799)
<223> n equals a,t,g, or c
<400> 1375
gcggctaact atggcgaccg ccacggagca gtgggttctg gtggagatgg tacaggcgct
                                                                      60
ttacgaggct cctgcttacc atcttatttt ggaagggatt ctgatcctct ggataatcag
                                                                     120
acttcttttc tctaagactt acaaattaca agaacgatct gatcttacag tcaaggaaaa
                                                                     180
agaagaactg attgaagagt ggcaaccaga acctcttgtt cctcctgtcc caaaagacca
                                                                     240
tcctgctctc aactacaaca tcgtttcagg ccctccaagc cacaaaactg tggtgaatgg
                                                                     300
aaaagaatgt ataaacttcg cctcatttaa ttttcttgga ttgttggata accctagggt
                                                                     360
taaggcagca gctttagcat ctctaaagaa gtatggcgtg gggacttgtg gacccagagg
                                                                     420
attttatggc acatttgatg ttcatttgga tttggaagac cgcctggcaa aatttatgaa
                                                                     480
gacagaagaa gccattatat actcatatgg gatttgccac catagccagt gctattcctg
                                                                     540
cttactctaa aagaggggac attgtttttg tagatagagc tgcctgcttt gctattcaga
                                                                     600
aaggattaca ggcatcccgt agtgacatta agttatttaa gcataatgac atggctgacc
                                                                     660
tcgagcgact actaaaagaa caagagatcg aagatcaaaa gaatcctcgc aaggctcgtg
                                                                     720
                                                                     780
taactcggcg tttcattgta gtagaaggat tgtatatgaa tactggaact atttgtcctc
                                                                     840
ttccagaatt ggttaagtta aaatacaaat acaaagcaag aatcttcctg gaggaaagcc
tttcatttgg agtcctagga gagcatggcc gaggagtcac tgaacactat ggaatcaata
                                                                     900
ttgatgatat tgatcttatc agtgccaaca tggagaatgc acttgcttct attggaggtt
                                                                     960
tctgctgtgg caggtctttt gtaattgacc atcagcgact ttccggccag ggatactgct
                                                                    1020
tttcagcttc gttacctccc ctgttagctg ctgcagcaat tgaggccctc aacatcatgg
                                                                    1080
aagagaatcc aggtattttt gcagtgttga aggaaaagtg cggacaaatt cataaagctt
                                                                    1140
tacaaggcat ttctggatta aaagtggtgg gggagtccct ttctccagcc tttcacctac
                                                                    1200
                                                                    1260
aactggaaga gagcactggg tctcgcgagc aagatgtcag actgcttcag gaaattgtag
                                                                    1320
atcaatgcat gaacagaagt attgcattaa ctcaggcgcg ctacttggag aaagaagaga
                                                                    1380
agtgtctccc tcctcccagc attcgggttg tggtcacggt ggaacaaaca gaggaagaac
```

| tagagagagc | tgcgtccacc | atcaaggagg | tagcccaggc | catcctactc | taggcagagt | 1440 |
|--|---|--|--|--|--|---|
| | tggcctcctg | | | | | 1500 |
| atagagacca | ctgaaagaga | gcaagaacat | atagatettt | gataggattg | ttaccaaatg | 1560 |
| atggagtggt | ggaccaattg | tataaccata | agaagatac | ttatttttt | taaaaagaaa | 1620 |
| gigicagiai | ggaccaattg | cgtgaccatg | ttaaggarge | agetaateae | agtgtataag | 1680 |
| acacatctaa | aagcccagga | actgatttt | ttaayayyaa | adctaatgac | agigiacaac | 1740 |
| tgatgtttaa | attgtgcatt | tagtactatt | taaatgtttt | cttatactag | tattttatat | |
| tcttttgttg | tcgtttaaaa | ctggagcttc | agtgtctctt | ccctccctct | aatagtaatg | 1800 |
| gttcagtaag | cactccttaa | ctccttagta | tttcatagaa | aaatgactgc | aacattaaag | 1860 |
| | cacttcarca | | | | | 1920 |
| gtattttcca | gtcttcgttg | tgtgaagcta | aatggtggct | aaaaggaaca | ctttttgtgt | 1980 |
| gattattata | aactttgcat | tgtatttgaa | tcttagaact | tttgtacaca | ctaaatattg | 2040 |
| atotcacacc | atttctaatc | tgagcatcct | tagccagaga | atattcatta | tacttcctaa | 2100 |
| gtgaggaata | atttaaatca | gaagctattt | tattttaatg | taattaacct | ttctttacat | 2160 |
| | ttcacctcta | | | | | 2220 |
| | catatccttt | | | | | 2280 |
| | | | | | | 2340 |
| | tagggacgtg | | | | | 2400 |
| | cttacaaatt | | | | | |
| | gtactttacc | | | | | 2460 |
| | | | | | ctcttgttaa | |
| | ataaaattgt | | | | | 2580 |
| catctttta | aacaacacat | actttttgaa | tgttcagttt | ctattttgct | tgaggtattt | 2640 |
| | tgccttgtga | | | | | 2700 |
| | gttttgtttt | | | | | 2760 |
| | aaaaaaaaa | | | _ | | 2799 |
| | | | 5555 | | | |
| <210> 1376 | | | | | | |
| <211> 990 | | | | | | |
| | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| | | | | | | |
| <400> 1376 | | | | | | |
| accatgtttc | atcatcctgt | | | | | 60 |
| accatgtttc | atcatcctgt gtatcagcct | | | | | 60 120 |
| accatgtttc taggtcaggg | gtatcagcct | cagccactca | gacaaggaaa | gggggcacca | catgagctca | |
| accatgtttc taggtcaggg gggaccccca | gtatcagcct cccccatccc | cagccactca tggcctgggt | gacaaggaaa gatggtacag | gggggcacca cgtctggccc | catgagctca tgccaggtcc | 120 |
| accatgtttc taggtcaggg gggacccca ttggcctgca | gtatcagcct cccccatccc caaagtcagt | cagccactca tggcctgggt gacagcaggt | gacaaggaaa gatggtacag gaaatgccca | gggggcacca cgtctggccc gctgggtgcc | catgagetea tgecaggtee tgeetggage | 120 180 |
| accatgtttc taggtcaggg gggaccccca ttggcctgca gggtgtgggg | gtatcagcct cccccatccc caaagtcagt cagtgagccc | cagccactca tggcctgggt gacagcaggt ctgtgggtgt | gacaaggaaa gatggtacag gaaatgccca gggcttggga | gggggcacca cgtctggccc gctgggtgcc gtggctgtga | catgagetea tgecaggtee tgeetggage caggtggtga | 120 180 240 300 |
| accatgtttc taggtcaggg gggaccccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct ccccatccc caaagtcagt cagtgagccc ggcaatcaga | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat | gggggcacca cgtctggccc gctgggtgcc gtggctgtga ggcccccggt | catgagetea tgccaggtee tgcctggage caggtggtga gagetgcagg | 120 180 240 300 360 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct ccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctccccacgg | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gcccgctccc | gggggcacca cgtctggccc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag | catgagetea tgccaggtee tgcctggage caggtggtga gagetgcagg gaaaatgtag | 120 180 240 300 360 420 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct ccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctccccacgg aattcggcag | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gcccgctccc ctggcagaca | gggggcacca cgtctggcc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa | catgagetea tgccaggtee tgcctggage caggtggtga gagetgcagg gaaaatgtag ggccacattg | 120 180 240 300 360 420 480 |
| accatgtttc taggtcaggg gggaccccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct ccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctccccacgg aattcggcag ggccactgcc | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gcccgctccc ctggcagaca ggatgtccca | gggggcacca cgtctggcc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa gttgacattc | catgagetea tgccaggtee tgcctggage caggtggtga gagetgeagg gaaaatgtag ggccacattg cactggegea | 120 180 240 300 360 420 480 540 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct ccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat acgccaggtc | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctccccacgg aattcggcag ggccactgcc ttgaccacgt | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gcccgctccc ctggcagaca ggatgtccca cgcccacggc | gggggcacca cgtctggcc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg | catgagetea tgccaggtee tgcctggage caggtggtga gagetgeagg gaaaatgtag ggccacattg cactggegea eggateagte | 120 180 240 300 360 420 480 540 600 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct ccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat acgccaggtc gatgcccagg | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctccccacgg aattcggcag ggccactgcc ttgaccacgt atctcgtctt | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gcccgctccc ctggcagaca ggatgtccca cgcccacggc | gggggcacca cgtctggcc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg cttgaacctg | catgagetea tgccaggtee tgcetggage caggtggtga gagetgeagg gaaaatgtag ggccacattg cactggegea eggateagte accatgacat | 120 180 240 300 360 420 480 540 600 660 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct ccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat acgccaggtc gatgcccagg gaagtcgggc | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctccccacgg aattcggcag ggccactgcc ttgaccacgt atctcgtctt agggactgcc | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gcccgctccc ctggcagaca ggatgtccca cgcccacggc tcctgctgcc aggcctggat | gggggcacca cgtctggcc gctgggtgcc gtggctgtga ggccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg cttgaacctg gaagcgcagc | catgagetea tgccaggtee tgcetggage caggtggtga gagetgeagg gaaaatgtag ggccacattg cactggegea eggateagte accatgacat tgggeetetg | 120 180 240 300 360 420 480 540 600 660 720 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct ccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat acgccaggtc gatgcccagg gaagtcgggc ctgggccaca | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctccccacgg aattcggcag ggccactgcc ttgaccacgt atctcgtctt agggactgcc ttctggtggg | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gcccgctccc ctggcagaca ggatgtccca cgcccacggc tcctgctgcc aggcctggat cttccaggat | gggggcacca cgtctggccc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg cttgaacctg gaagcgcagc ccgtggggtg | catgagetea tgccaggtee tgcetggage caggtggtga gagetgeagg gaaaatgtag ggccacattg cactggegea eggateagte accatgacat tgggeetetg agetgettgg | 120 180 240 300 360 420 480 540 600 660 720 780 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct ccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat acgccaggtc gatgcccagg gaagtcgggc ctgggccaca tcgctggaaa | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctcccacgg aattcggcag ggccactgcc ttgaccacgt atctcgtctt agggactgcc ttctggtggg cggggggcaa | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gcccgctccc ctggcagaca ggatgtccca cgcccacggc tcctgctgcc aggcctggat cttccaggat caaggccgta | gggggcacca cgtctggccc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg cttgaacctg gaagcgcagc ccgtggggtg ggggttgagg | catgagetea tgccaggtec tgcctggage caggtggtga gagetgeagg gaaaatgtag ggccacattg cactggegea eggateagte accatgacat tgggeetetg agetgettgg eceteggeag | 120 180 240 300 360 420 480 540 600 660 720 780 840 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct ccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat acgccaggtc gatgcccagg gaagtcgggc ctgggccaca tcgctggaaa gccgtgggg | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctcccacgg aattcggcag ggccactgcc ttgaccacgt atctcgtctt agggactgcc ttctggtggg cggggggcaa tggttgcccg | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gcccgctccc ctggcagaca ggatgtccca cgcccacggc tcctgctgcc aggcctggat cttccaggat caaggccgta ggccccact | gggggcacca cgtctggccc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg cttgaacctg gaagcgcagc ccgtggggtg ggggttgagg gcccgtgcgc | catgagetea tgccaggtec tgcctggage caggtggtga gagetgeagg gaaaatgtag ggccacattg caetggegea eggateagte accatgacat tgggeetetg agetgettgg eceteggeag tgeaggetga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct ccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat acgccaggtc gatgcccagg gaagtcgggc ctgggccaca tcgctggaaa gccgtgggg | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctcccacgg aattcggcag ggccactgcc ttgaccacgt atctcgtctt agggactgcc ttctggtggg cggggggcaa tggttgcccg | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gcccgctccc ctggcagaca ggatgtccca cgcccacggc tcctgctgcc aggcctggat cttccaggat caaggccgta ggccccact | gggggcacca cgtctggccc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg cttgaacctg gaagcgcagc ccgtggggtg ggggttgagg gcccgtgcgc | catgagetea tgccaggtec tgcctggage caggtggtga gagetgeagg gaaaatgtag ggccacattg caetggegea eggateagte accatgacat tgggeetetg agetgettgg eceteggeag tgeaggetga | 120 180 240 300 360 420 480 540 600 660 720 780 840 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct ccccatccc caaagtcagt cagtgagccc ggcaatcagat catccagctc actcgtgtac caaactcgat acgccaggtc gatgcccagg gaagtcgggc ctgggccaca tcgctggaaa gccgtggggg gatggcctgc | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctcccacgg aattcggcag ggccactgcc ttgaccacgt atctcgtctt agggactgcc ttctggtggg cggggggcaa tggttgcccg acctcgctgg | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gcccgctccc ctggcagaca ggatgtccca cgcccacggc tcctgctgcc aggcctggat cttccaggat caaggccgta ggccccact tgtagctgct | gggggcacca cgtctggccc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg cttgaacctg gaagcgcagc ccgtggggtg ggggttgagg gcccgtgcgc | catgagetea tgccaggtec tgcctggage caggtggtga gagetgeagg gaaaatgtag ggccacattg caetggegea eggateagte accatgacat tgggeetetg agetgettgg eceteggeag tgeaggetga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct ccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat acgccaggtc gatgcccagg gaagtcgggc ctgggccaca tcgctggaaa gccgtgggg | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctcccacgg aattcggcag ggccactgcc ttgaccacgt atctcgtctt agggactgcc ttctggtggg cggggggcaa tggttgcccg acctcgctgg | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gcccgctccc ctggcagaca ggatgtccca cgcccacggc tcctgctgcc aggcctggat cttccaggat caaggccgta ggccccact tgtagctgct | gggggcacca cgtctggccc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg cttgaacctg gaagcgcagc ccgtggggtg ggggttgagg gcccgtgcgc | catgagetea tgccaggtec tgcctggage caggtggtga gagetgeagg gaaaatgtag ggccacattg caetggegea eggateagte accatgacat tgggeetetg agetgettgg eceteggeag tgeaggetga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct ccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat acgccaggtc gatgcccagg gaagtcgggc ctgggccaca tcgctggaaa gccgtggggg gatggcctgc gcggcagcca | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctcccacgg aattcggcag ggccactgcc ttgaccacgt atctcgtctt agggactgcc ttctggtggg cggggggcaa tggttgcccg acctcgctgg | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gcccgctccc ctggcagaca ggatgtccca cgcccacggc tcctgctgcc aggcctggat cttccaggat caaggccgta ggccccact tgtagctgct | gggggcacca cgtctggccc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg cttgaacctg gaagcgcagc ccgtggggtg ggggttgagg gcccgtgcgc | catgagetea tgccaggtec tgcctggage caggtggtga gagetgeagg gaaaatgtag ggccacattg caetggegea eggateagte accatgacat tgggeetetg agetgettgg eceteggeag tgeaggetga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct cccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat acgccaggtc gatgcccagg gaagtcgggc ctgggccaca tcgctggaaa gccgtggggg gatggcctgc gcggcagcca | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctcccacgg aattcggcag ggccactgcc ttgaccacgt atctcgtctt agggactgcc ttctggtggg cggggggcaa tggttgcccg acctcgctgg | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gcccgctccc ctggcagaca ggatgtccca cgcccacggc tcctgctgcc aggcctggat cttccaggat caaggccgta ggccccact tgtagctgct | gggggcacca cgtctggccc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg cttgaacctg gaagcgcagc ccgtggggtg ggggttgagg gcccgtgcgc | catgagetea tgccaggtec tgcctggage caggtggtga gagetgeagg gaaaatgtag ggccacattg caetggegea eggateagte accatgacat tgggeetetg agetgettgg eceteggeag tgeaggetga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct cccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat acgccaggtc gatgcccagg gaagtcgggc ctgggccaca tcgctggaaa gccgtggggg gatggcctgc gcggcagcca | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctcccacgg aattcggcag ggccactgcc ttgaccacgt atctcgtctt agggactgcc ttctggtggg cggggggcaa tggttgcccg acctcgctgg | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gcccgctccc ctggcagaca ggatgtccca cgcccacggc tcctgctgcc aggcctggat cttccaggat caaggccgta ggccccact tgtagctgct | gggggcacca cgtctggccc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg cttgaacctg gaagcgcagc ccgtggggtg ggggttgagg gcccgtgcgc | catgagetea tgccaggtec tgcctggage caggtggtga gagetgeagg gaaaatgtag ggccacattg caetggegea eggateagte accatgacat tgggeetetg agetgettgg eceteggeag tgeaggetga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct cccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat acgccaggtc gatgccagg gaagtcgggc ctgggccaca tcgctggaaa gccgtgggg gatggcctgc gcggcagcca | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctcccacgg aattcggcag ggccactgcc ttgaccacgt atctcgtctt agggactgcc ttctggtggg cggggggcaa tggttgcccg acctcgctgg | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gcccgctccc ctggcagaca ggatgtccca cgcccacggc tcctgctgcc aggcctggat cttccaggat caaggccgta ggccccact tgtagctgct | gggggcacca cgtctggccc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg cttgaacctg gaagcgcagc ccgtggggtg ggggttgagg gcccgtgcgc | catgagetea tgccaggtec tgcctggage caggtggtga gagetgeagg gaaaatgtag ggccacattg caetggegea eggateagte accatgacat tgggeetetg agetgettgg eceteggeag tgeaggetga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct cccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat acgccaggtc gatgccagg gaagtcgggc ctgggccaca tcgctggaaa gccgtgggg gatggcctgc gcggcagcca | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctcccacgg aattcggcag ggccactgcc ttgaccacgt atctcgtctt agggactgcc ttctggtggg cggggggcaa tggttgcccg acctcgctgg | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gcccgctccc ctggcagaca ggatgtccca cgcccacggc tcctgctgcc aggcctggat cttccaggat caaggccgta ggccccact tgtagctgct | gggggcacca cgtctggccc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg cttgaacctg gaagcgcagc ccgtggggtg ggggttgagg gcccgtgcgc | catgagetea tgccaggtec tgcctggage caggtggtga gagetgeagg gaaaatgtag ggccacattg caetggegea eggateagte accatgacat tgggeetetg agetgettgg eceteggeag tgeaggetga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct cccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat acgccaggtc gatgcccagg gaagtcgggc ctgggccaca tcgctggaaa gccgtggggg gatggcctgc gcggcagcca | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctcccacgg aattcggcag ggccactgcc ttgaccacgt atctcgtctt agggactgcc ttctggtggg cggggggcaa tggttgcccg acctcgctgg | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gcccgctccc ctggcagaca ggatgtccca cgcccacggc tcctgctgcc aggcctggat cttccaggat caaggccgta ggccccact tgtagctgct | gggggcacca cgtctggccc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg cttgaacctg gaagcgcagc ccgtggggtg ggggttgagg gcccgtgcgc | catgagetea tgccaggtec tgcctggage caggtggtga gagetgeagg gaaaatgtag ggccacattg caetggegea eggateagte accatgacat tgggeetetg agetgettgg eceteggeag tgeaggetga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct cccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat acgccaggtc gatgccagg gaagtcgggc ctgggccaca tcgctggaaa gccgtggggg gatggcctgc gcggcagcca | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctcccacgg aattcggcag ggcactgct ttgaccacgt atctcgtctt agggactgcc ttctggtggg cggggggcaa tggttgcccg acctcgctgg gcctcgtgc | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gccgctccc ctggcagaca ggatgtccca cgcccacggc tcctgctgcc aggcctggat cttccaggat caaggccgta ggccccact tgtagctgct | gggggcacca cgtctggccc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg cttgaacctg gaagcgcagc ccgtggggtg ggggttgagg gcccgtgcgc gtcggccatg | catgagetea tgccaggtec tgcctggage caggtggtga gagetgcagg gaaaatgtag ggccacattg cactggegea eggateagte accatgacat tgggeetetg agetgettgg eceteggeag tgcaggetga gtgeggeett | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 990 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct ccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat acgccaggtc gatgccagg gaagtcgggc ctgggccaca tcgctggaaa gccgtggggg gatggcctgc gcggcagcca | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctcccacgg aattcggcag ggcactgct tagccactgc ttgaccacgt atctcgtctt agggactgcc ttctggtggg cggggggcaa tggttgcccg acctcgctgg gcctcgtgc | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gccgctccc ctggcagaca ggatgtccca cgccacggc tcctgctgcc aggcctggat cttccaggat caaggccgta ggccccact tgtagctgct | gggggcacca cgtctggccc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg cttgacactg gaagcgcagc ccgtggggtg ggggttgagg gcccgtgcgc gtcggccatg | catgagetea tgccaggtec tgcctggage caggtggtga gagetgcagg gaaaatgtag ggccacattg cactggegea cggateagte accatgacat tgggeetetg agetgettgg cecteggeag tgcaggetga gtgcagetta | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 990 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct ccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat acgccaggtc gatgccagg gaagtcggac tcgctggaaa gccgtggagg gatggcctgc gcggcagcca tcgctgcagcca | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctcccacgg aattcggcag ggcactgc ttgaccacgt atctcgtctt agggagtgc ctggggggcaa tggttgcccg acctcgctgg gcctcgtgc | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gccgctccc ctggcagaca ggatgtcca cgccacggc tcctgctgcc aggcctggat cttccaggat caaggccgta ggccccact tgtagctgct | gggggcacca cgtctggccc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg cttgaacctg gaagcgcagc ccgtggggtg gggttgagg gcccgtgcgc gtcggccatg | catgagetea tgccaggtec tgcctggage caggtggtga gagetgcagg gaaaatgtag ggccacattg cactggegea cggateagte accatgacat tgggeetetg agetgettgg cecteggeag tgcaggetga gtgcaggetta gtgeggeett | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 990 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct ccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat acgccaggtc gatgccagg gaagtcggac tcgctggaaa gccgtggagg gatggcctgc gcggcagcca tcgctgcagcca | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctcccacgg aattcggcag ggcactgc ttgaccacgt atctcgtctt agggagtgc ctggggggcaa tggttgcccg acctcgctgg gcctcgtgc | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gccgctccc ctggcagaca ggatgtcca cgccacggc tcctgctgcc aggcctggat cttccaggat caaggccgta ggccccact tgtagctgct | gggggcacca cgtctggccc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg cttgaacctg gaagcgcagc ccgtggggtg gggttgagg gcccgtgcgc gtcggccatg | catgagetea tgccaggtec tgcctggage caggtggtga gagetgcagg gaaaatgtag ggccacattg cactggegea cggateagte accatgacat tgggeetetg agetgettgg cecteggeag tgcaggetga gtgcaggetta gtgeggeett | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 990 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct ccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat acgccaggtc gatgccagg gaagtcggacaca tcgctggaaa gccgtgggg gatggcctgc gcggcagcca sapiens tcccacttat gaataatggt ggctgagtaa | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctcccacgg aattcggcag ggcactgcc ttgaccacgt atctcgtctt agggactgc ttgtggggcaa tggttgcccg acctcgctgg gcctcgtgc | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gcccgctccc ctggcagaca ggatgtccca cgcccacggc tcctgctgca aggcctggat cttccaggat cttccaggat cttagccgta ggccccact tgtagctgct | gggggcacca cgtctggccc gctgggtgcc gtggctgtga ggccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg cttgaacctg gaagcgcagc ccgtggggtg gggttgagg gccgtgcgc gtcggccatg | catgagetea tgccaggtec tgcctggage caggtggtga gagetgcagg gaaaatgtag ggccacattg cactggegea cggateagte accatgacat tgggcetetg agetgettgg cecteggeag tgcaggetga gtgcaggetta gtgcggett | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 990 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct ccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat acgccaggtc gatgccagg gaagtcgggc ctgggccaca tcgctggaaa gccgtggggg gatggcctgc gcggcagcca sapiens tcccacttat gaataatggt ggctgagtaa catttaggtt | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctcccacgg aattcggcag ggcactgcc ttgaccacgt atctcgtctt agggactgc ttggtggg cggggggcaa tggttgcccg acctcgctgg gcctcgtgc | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gcccgctccc ctggcagaca ggatgtccca cgcccacggc tctgctgct aaggcctgat cttccaggat cttccaggat cttcaggat ctagccgta ggccccact tgtagctgct | gggggcacca cgtctggccc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg cttgaacctg gaagcgcagc ccgtggggtg gggttgagg gcccgtgcgc gtcggccatg | catgagetea tgccaggtec tgcctggage caggtggtga gagetgcagg gaaaatgtag ggccacattg cactggegea cggateagte accatgacat tgggcetetg agetgettgg cecteggeag tgcaggetga gtgcagetta tgtgegett tgtgegett tgcggett tcattattea tetaettgtt ctgctataaa | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 990 |
| accatgtttc taggtcaggg gggacccca ttggcctgca gggtgtgggg gcagggcagg | gtatcagcct ccccatccc caaagtcagt cagtgagccc ggcaatcaga catccagctc actcgtgtac caaactcgat acgccaggtc gatgccagg gaagtcggacaca tcgctggaaa gccgtgggg gatggcctgc gcggcagcca sapiens tcccacttat gaataatggt ggctgagtaa | cagccactca tggcctgggt gacagcaggt ctgtgggtgt cagccctcag ctcccacgg aattcggcag ggccactgcc ttgaccacgt atctcgtctt agggactgc ttctggtggg cggggggaa tggttgcccg acctcgctgg gcctcgtgcc aagggagaac ctccagctcc tattccatgg ggttccatat tttcaaataa | gacaaggaaa gatggtacag gaaatgccca gggcttggga aaggcctcat gcccgctccc ctggcagaca ggatgtccca cgcccacggc tctgctgct aaggcctgat cttccaggat cttccaggat ctagccgta ggccccact tgtagctgct tgtagctgct tgtagcttgtt atatgatatt atccaggttg tagaatgtta tttcgcaatt tgacttcttt | gggggcacca cgtctggccc gctgggtgcc gtggctgtga ggcccccggt gcgtcgacag cgcagctgaa gttgacattc caagtcgatg ccttgaacctg gaagcgcagc ccgtggggtg ggggttgagg gccgtgcgc gtcggccatg tggttgtcca ctgcaaatgc cttttgttta gcaaattgtg ttattaacac | catgagetea tgecaggtec tgectggage caggtggtga gagetgeagg gaaaatgtag ggecacattg cactggegea cggateagte accatgacat tgggeetetg agetgettgg cecteggeag tgeaggetga gtgeggeett ttactgaget cattattea tetacttgtt ctgetataaa cetgtagtta | 120 180 240 300 360 420 480 540 660 720 780 840 900 960 990 |

```
ggcctgttcc agtcattctg gctttcatct tgatttgttt ttcttaaaac tttctccagc
                                                                    420
                                                                    480
ttccctctgc atctgtgatt cgtgctctgc ttcttgtttg tggctttgga tcaataatgc
tacagatcca gtctaattaa tcatggatca aaagctaaag catccttccc ccagatggtt
                                                                    540
                                                                    600
tattattaat accacccaga aaaataattt ataatttaat tototacctc atagagtttg
ggatccttgg tagaatgtgt tcccttcccc ttttcttctt cgctatttcc tcctcttcct
                                                                    660
ctccatcaaa agtggcttta tctccacctt tgcagctgac agcaaccctc ccatgctccg
                                                                    720
ttgatgaagc cctcctttct taacccctcg tccatatggc tctccctcca ccctgctcca
                                                                    780
tctcctgtga tctcaaggcc tcggagaaat gatctcaagg cctcggagaa atgaaaagtg
                                                                    840
acctttggta tttgagacaa ccaatagcaa aatatagctc ccacttccaa cagcccatat
                                                                    900
tggtggggga gggatttgct tcatacgtgg tctgtgttgg gccattctcc ttctccatgt
                                                                    960
                                                                   1020
tttctctgtt cttacagcac catctttttg cctcatttct ttgctctact ctattcctcc
cccatcatcg tctggtgact cacactgtaa tcctagcact ttcggaggat cacctaaagt
                                                                   1080
                                                                   1140
caggagtttg aggccagcct ggccaacatg gcaaaacccc gtctctacta aaaatacaaa
aattagctgg gcgtggtaat gggcgcctgt aatcccagct actcaggagg ttggggtggg
                                                                   1200
                                                                   1260
agaatcacgt gaacctggga ccgggaggct gcagtgagcc aagatggtgc cactgcactc
                                                                   1316
cagectggge aacagagega gacteegtet caaaaaacaa aaaaaaaaa aaaaaa
<210> 1378
<211> 1146
<212> DNA
<213> Homo sapiens
<400> 1378
                                                                     60
ggcacgagat cattttgatt tctaacaata ttggtgttgg ttattggacc ttccttccat
                                                                    120
gaagcccagt gagctgcttc tgacagaggt accaagagac tacaggggaa ctaatgggat
tgtcctcagt gacatcagtt ttaccagctg gggactttgt ttgaatgccc tggatttact
                                                                    180
                                                                    240
cactgaccac tctggaaatg caatctattg attgataacc ctccttgaac ttatctgtaa
                                                                    300
aaccattcat gaaatatttt atgtttccat aggctggcaa gttctcattt ttgtgtgtta
                                                                    360
gattttcatg gtgaccctct ggctctataa ttcttttatt tgaaaaaaca caaccatgtt
                                                                    420
tactctqtca ttactcttca agetttttcg tatttcattt tecetteett ttagaaggag
tgttttcaca ctgtagcttt tctcatttct ttatgcaatc accctgagag atcgaaagtt
                                                                    480
attaaqcata ataacctata ttgtgtcaaa ttgtgggtac atccaaagtg cagccatgcg
                                                                    540
                                                                    600
tgggtgttaa taggaaattc caaagggttc ataaaaatat cttcagaagt ttaatacatt
cagaatatat ccaattagca ttagtggatt tctaatttca cttgacacat tcatcataat
                                                                    660
                                                                    720
gaattttgct tttgaagtag tgttctgttt aaactggcgc tctggtctat ggtagtgttt
ttttttttt ttttaaaaac aggcttactt tcaacatcca tttacaaaca tttgttgaaa
                                                                    780
                                                                    840
aatattttag gagtatttgt ttaaacatta ttccgaattt actgctccat aaagcctagt
gaatatttaa attettgaat atgttgeeag aaaaagaage agagateeaa aaacaagtat
                                                                    900
atgaccagag ttagagctga aataatagct tgttgaagaa gagaaaattg taataaattg
                                                                    960
ctttatcaaa cttgctttca aaacctgttt tttaagttgg gcacagtggc tcacgcctgt
                                                                   1020
aatcccagca ctttgagagg ccaaggtggg tagatcacgt gagctcagga gttcaagacc
                                                                   1080
1140
                                                                   1146
aaaaaa
<210> 1379
<211> 545
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (46)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (536)
<223> n equals a,t,g, or c
<220>
<221> SITE
```

```
<222> (544)
<223> n equals a,t,g, or c
<400> 1379
ccgctctaga actagtggat cccccgggct gcaggaattc ggcacnaggt agggctgcca
                                                                     60
ggctgcagcc tgctgctcca gggagcacca gctgcagctg atccaataca ccaagcctgt
                                                                    120
gtctccctct tctatcacct ctctccagga tctctgctgt ctcttggatc ccatctgcct
                                                                    180
agatggaaga ggatcctatc cgaagctagg ataaatgttg tcttactcct ctgctatgtt
                                                                    240
ctcccagaaa aaattgatta caagttctct gctgtggttg ctgcagctcc aggaagtccc
                                                                    300
cgcaatgtct cacgttgtct ttgaccagtg gtccccagta ccaggccaga gaagacaact
                                                                    360
ttataatgtc atttgtgttg tgaaaattct tccactgacc caaaatggaa ccgtacaaag
                                                                    420
cctatccgtg tatatggaaa agtctcatgc acctggatta actcagaaaa agtaaagtcc
                                                                    480
tgaaacttca aaaaaaaaa aaaaaaactc gagggggggc ccggtaccca attcgnccta
                                                                    540
                                                                    545
tagna
<210> 1380
<211> 606
<212> DNA
<213> Homo sapiens
<400> 1380
ggcacgagct cgtgccgact cgtgccattt aacctgatac agtcatacct attaatgaat
                                                                      60
tgcatgctca aaaattactt ataattagga gtataagatc aaagatgttt ggaaactaat
                                                                     120
gatatatatt gatttaatta gccatgtccc tattgataaa cttttgggtt gttttcagtg
                                                                     180
tttttctctt ataaataata ctgcagtgag taaaaccttg atgccttttt ctgagttctc
                                                                     240
300
ggaaaattcc aaattgcttt ccaaagtgtc tgtacagggc tgggcaccat ggctcatgct
                                                                     360
tataatctca gcactttggg aggccgaggt gggaggatcg cttgagccca ggagtttgag
                                                                     420
gctgcagtga gctaagattt ttgctactgc actccagcct gggtatatca gtctgttttc
                                                                     480
atgctgctga taaagacata cctgagactg ggaagaaaaa gaggtttaat tggacttaca
                                                                     540
gttccagagt ctcaggcagg cctccttgtc ccagatccct tgtgaatgca ctaactctga
                                                                     600
                                                                     606
ccggca
<210> 1381
<211> 1035
<212> DNA
 <213> Homo sapiens
<400> 1381
ggcacgagtt tctgacaagg cacagctctg gctgaagctt catttaccct caaaacctct
                                                                      60
gctggtcagg atgaccaggt aaataatttt ctgaagaaga cagcaaagca aaagtgtgct
                                                                     120
 agatacactg aatcctgttg ccaaagaacc acaccagtga ggctgccaca cacgaaggaa
                                                                     180
ggaggtctct gaagcaagat gtgccgtgtg tcccctaaac agtagctttt gttttgcctc
                                                                     240
gtatgcaaga ccaatgctat caagttgaaa gagacttttt ggcagaactt cagacatcaa
                                                                     300
agaggatgga tgctgtgact atctgtggtg ccaagaaggg ggatgaaaat gaatgcagat
                                                                     360
gtattcactt caatagatga cagtgtcctt ggtttccagg agttctgtgt tcaacacttg
                                                                     420
 tatttacaat gctcaggcaa ggaggccatg ccatcaacct aatgtcatta cagcaggcag
                                                                     480
 gtggaaaatg agtttaaagc aatcgctttg tgccttgttt gttctctcac taattcaatc
                                                                     540
 taatctcaag ccccaaacag atcttccacc agttctgttc tcagggggct tcagccccta
                                                                     600
 gaaacaccta ccttgaattc aagctgtgtt gggacaacca aaaagaagga aaggttaaaa
                                                                     660
 ggaagaaaac aagggaaaga attggggaga aggagattaa ggaagaaaag caggaggccg
                                                                     720
 ggcgcggtgc tcacgcctgt aatcccagca ctttgggagg ccgaggcggg tggatcatga
                                                                     780
 ggtcaggaga tcgagaccat cctggctaac aaggtgaaac cccgtctcta ctaaaaatac
                                                                     840
 aaaaaattag ccgggcgcgg tggcgggcgc ctgtagtccc agctactcgg gaggctgagg
                                                                     900
                                                                     960
 caggagaatg gcgtgaaccc gggaagcgga gcttgcagtg agccgagatt gcgccactgc
 agtccgcagt ccggcctggg cgacagagcg agactccgtc tcaaaaaaaa aaaaaaaaa
                                                                     1020
                                                                     1035
 aaaaaaaaa aaaaa
 <210> 1382
 <211> 2414
 <212> DNA
```

<213> Homo sapiens

| <400> 1382 | | tcttccctaa | aagaagatt | acaactaacc | cttgaactca | 60 |
|------------|------------------------------|------------------------------|------------|--------------|--------------------------|--------------|
| ctaaacccac | agetttaagt | tctcttctcc | acatotocat | gccttcgcat | caatacttat | 120 |
| cagttttaaa | acacagtata | gataatctcc | tatytaaaat | gt.gggacagg | gtgtttcatg | 180 |
| tttteetggt | taagetteete | ctctttatag | tgaactggtg | acccaaatgt | ccctgtcatt | 240 |
| geageggage | taataaccca | aatgactccc | tgtcagtaga | gtcccatgtg | gcccatgctt | 300 |
| gagagaaga | gatgatta | cactgttttt | aaggctagat | tatcagttct | agaatgatta | 360 |
| cacacaagca | gadacgadeg | tcctcagata | ttcacactat | gaaatggagg | tgcttgatgt | 420 |
| gtttgagag | gggggctace | acagtcttct | atcttactqt | taattcagca | gtattttatt | 480 |
| gtttaacaca | acccagtat | ttgagctcac | tcaggaattg | gggagagaga | tggaccacca | 540 |
| ctataataca | tttcttaagt | gttctgggag | aatgtcatac | ttttccttcc | cagagtaaaa | 600 |
| gaaaccttkg | ggagatcctg | agggagactg | tttctcccca | agtatgatga | tgtctagtca | 660 |
| agtetaagaa | taccactgga | catgttctat | ggacatttgg | gattgcagtt | gctattctga | 720 |
| tttgattggt | cctcagtcaa | atggatcact | ttgaaggaaa | gctttggttg | tcaccgktat | 780 |
| ataccactga | gataaagtgt | tagcmaagta | tggttcaaat | taacttatga | catgaccaag | 840 |
| agettttete | ttccaaaaqa | tgaattgtat | tgtaaatagt | ttctcaaaat | atttttaact | 900 |
| ggatcatgag | catggggaga | gaaagtttct | cagctgctaa | gaatttcccc | actgtttact | 960 |
| tctttcactt | atggtggtat | tgcatttaag | attacaaaat | ttaaggtttt | atttgtatct | 1020 |
| attacccaaa | ccattaaatt | gtctttaatt | tcattgttgt | cttggaggtc | cagtgcatac | 1080 |
| agggctgatg | ggggaaaact | ccctctagcc | agtcagcact | ctaacccagg | attaaaccat | 1140 |
| cccatcaagt | agtatgtgaa | gtcaagtctt | cgtactcttg | cagaccagac | attgaaatgg | 1200 |
| attcattcat | atagatttct | ataaatccta | taagtgaaaa | gatagacaac | tgtccgcagt | 1260 |
| tgcttttaaa | aaaggtcact | ataataagta | ctatatagta | cagtattaat | ttatagcagg | 1320 1380 |
| aaatcgtatc | ttgtaaactg | tatataaaac | actgttttat | ggtgcaatca | tttgtcaaac | 1440 |
| ttttgtctgt | ttcattgttt | ttagagtgtg | tgcattcttc | tcatacctaa | gaatateact | 1500 |
| gtaaaatctg | ctgaaaacta | tttttaggtt | ttatttgcac | aagactgaat | tattanattt | 1560 |
| tttttggaag | ctcctattga | acatacccaa | acatctgtaa | acatgaaaaa | tatattatta | 1620 |
| attaaaagca | aacatttcag | tatgattctt | tccaaaggta | acceatguic | ctatttcatt | 1680 |
| atgtgtgtat | gtaatttttc | tgactcttcc | acctcttata | ttatagatga | ccasaacact | 1740 |
| tgttttgttt | ttgaaggatg | gctctttttt | cititiaatg | cttgatgatga | tataaatta | 1800 |
| attggttttt | accetttege | ctaaagcttt aataataaat | gatacccca | acaaacaatc | tattaattta | 1860 |
| ctgtttaatc | catanana | acagtattgg | gaaactaact | ttgcatatgc | taktaactat | 1920 |
| gaggaaaggc | cctyaaaaat | atgggaagaa | cataktacat | ttattttqtc | tttattaaaa | 1980 |
| cattyygear | catgggttt | tctgattata | gtaactgttt | tatcaaccca | cttcatcttt | 2040 |
| gactactage | atttacattc | acaattcaaa | acagtaagct | gtctttcaga | aaatttttga | 2100 |
| addadaccdd | catgaaggaa | aaaagtggcc | catatagata | ggattcccta | cacaggactt | 2160 |
| ttagttgtat | cacctcaaga | gattttgaag | tttgtgatca | aggtctgtat | attatcccaa | 2220 |
| actttattaa | gaattgtttt | ctaattggtt | ataacatttt | tcaattaata | gtttcaaaac | 2280 |
| aaattottaa | tacaactgta | taaaatgaac | ataattttcc | tcacttgtat | ttttgttatt | 2340 |
| gagcaagttt | atcaaaataa | attgtctact | aaagaaacta | aaaaaaaaa | aaaaaaaaa | 2400 |
| aaaaaaactc | | | | | | 2414 |
| | | | | | | |
| <210> 1383 | | | | | | |
| <211> 582 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1383 | | taggctcatc | 200100000 | ccccaattct | ctatcacaat | 60 |
| ggcacgagat | ccacttccca | taggeteate | acciggcaat | tatctaattct | tttataccta | 120 |
| agttctgcct | ctttaaaata | atattttass | adalitatat | tatatata | tttgtacctg tggtttgttt | 180 |
| gcttatttca | . calayaataa . ttgagtatta | . alytitiydd . tactotatoa | atataccasa | atttatatat | ctgttcaccg | 240 |
| cattttgttg | , ctyaytatto | ttacaacttt | aaagctacta | taaataaacc | tgctaaaaat | 300 |
| actgattgat | , accepyocia | attaatataa | attotcattt | ctctagaata | aatatctaag | 360 |
| gullacalda | . gagetttige · ctaddttata | tgataagtat | aaccatatto | ttaagcatto | tagttgatgt | 420 |
| ayyayaatti | , coaggetata | aagcaattaa | aatgaaagaa | tatttcaaaa | gataaaagag | 480 |
| aatatagaaa | : aacatggtta | taaaagccag | tggaagagto | , attaagggat | ggaaactgga | 540 |
| gtttcaatgt | : tagaacttca | gaaattgaaa | aaaaaaaaa | aa | | 582 |
| 5 | - | - - | | | | |

```
<210> 1384
<211> 1426
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (506)
<223> n equals a,t,g, or c
<400> 1384
ggcacgagta ctcatacaaa ttcttagtat atggtgcgta tactgtcaat ggtagttatc
                                                                    60
atcatcatca ttattaatgg gagcccatta tgtgtgctgt cttatttcat cttcacaata
                                                                   120
ttcacatgaa ataagcatta tctgtacttt atgaataaga aaactgaggc tcaaagacat
                                                                   180
aaatgtctta atcaagtcac ccatctatta tcagaaagaa cggggatttg aaaatgcatc
                                                                   240
                                                                   300
ttcctagaga caaaacttgt ttccattatg ccacaggatt ttactatgta ccacggcttt
aaaaataata actcttagga ggacttattt ataaaagact cctggtattg caggaggaaa
                                                                   360
gtaaatatat tttcatgact ctgcatctaa ctctgggttc tttccttaat cccatgtgtg
                                                                   420
tgtgtgtgtg tgtgtgtgt tctttttaa agggaaaaat acccatagat tttctcttgc
                                                                    480
                                                                    540
ttcagtgcaa cattgcagat gatccntagt gatgaccttt cccaaagtta cattgtagaa
                                                                    600
ttcattggct aatatcggct gataccaccg catgaggtgc ataattaagt gatgtggtgg
                                                                    660
caagaccaga ttcattatcg tagacggtca tgtgccctgc catgacattt tggtcaggga
cagactgcat atacagtggt gtgcccataa gattataatg gagctcagct aaaaattcct
                                                                    720
attcttggtg acatcatagc cgtcataaca ccgtagtgca acacattact ttttctatgt
                                                                    780
ttaggtaagt ttctatacac aaatacttac cactgttttg ccgttgccta acatattcag
                                                                    840
                                                                    900
tacagtagca tactgtacag gtttgcaaca ggctatacca caccgcctag gtatgtagta
ggctgtacat ctaggttcgt gtaagtaaat tgtatgatgt ttacacaatg agaaaatgtt
                                                                    960
ccatttccca gttcatatcc tccttcttaa gcaatgcatg agtatctctt ctgttcttat
                                                                   1020
gctttcctct tccaggaaat agatataagt tgtgtcctag caacaatttt ttgcttcaca
                                                                   1080
taatatctaa agatatctaa ataaattaag attcactaat gactctagtg gcttttaatg
                                                                   1140
ccatgagata ttcctactag ttctttctgt cattggttta ttttcattat gtagattaga
                                                                   1200
                                                                   1260
aatgaataaa aattacttcc ttattttaca ctaatactaa taaatgcctc tgatttttag
agaactgtaa tagatatatg atgtgttact ctctttgact atttgtataa ttttgttttt
                                                                   1320
taaagataca tctagattaa aaactactgt tgtaagctgt tgaaatcttc catatggcca
                                                                   1380
                                                                   1426
<210> 1385
<211> 712
<212> DNA
<213> Homo sapiens
<400> 1385
                                                                     60
gctggaacca acaagaaaac cttaatatgg aactgcaatg atgggaattt ggggcattga
                                                                    120
aagaagttgg gttggcaaca ttgcttgggt gatttccttg ctaacattgt actgtaaggt
                                                                    180
gtgagggcct ttgcattaga ctctgactgg gctctgtaaa cctgagcctc attcttagaa
                                                                    240
cctcttgagc cccttgatgt tgcccagtca agtccatagt gactgtaggg gctgaacttc
                                                                    300
aagggccact tttgcttata gccatcacct gagagcacct ccagaatcaa aatggccttg
                                                                    360
ggaagtactt gccccagaga gagttttaaa aattattctg tcaatctgac tcaattcctt
gtagatagtt catttccagg catgtatttt cttggagttt gttaaaaaca atggaaaaat
                                                                    420
                                                                    480
 cttatcttaa aagtacctct tgggccgggt gcggtggctc acgtctataa tcccagcact
                                                                    540
 ttggaaggct gaggtgggca aatcacctga ggtcaggagt gtaagaccag tctgaccaac
 gtggtgaaac cctgtctcta caaaaataca aaaattaacc aggcatgatg gcaggtgcct
                                                                    600
 gtaatcccag ctacttggga ggctgagatg ggagaattgt ttgaacctgc tgcattccag
                                                                    660
                                                                    712
 <210> 1386
 <211> 1702
 <212> DNA
 <213> Homo sapiens
```

| <400> 1386 | | | tattataat | tataccaatc | acacagagg | 60 |
|------------|------------------------------|------------------------------|------------------------------|----------------------------|--|------|
| ggcacgagat | cacacatcat ccttggggac | ttattatca | actacatett | cacaacaaaa | ctgagcactc | 120 |
| tccggggaga | gctgggcagg | attataatta | acctaaacca | gcagcagag | cttctgtaca | 180 |
| cgtttgtgtc | aatcctcacg | ctaccacct | teettteeta | ccggatcctt | ctcttcccct | 240 |
| aggtgaatgg | gtcctatggc | cadagacaca | gactaagect | gctccaagta | cccttcagca | 300 |
| tcatgtactg | ctgcaacgtg | accastacct | tecteatage | tectcagate | tactggttct | 360 |
| teccatteta | caggaaggca | gccaatgcct | ttgacactcc | ccaagccaaa | aaggatggct | 420 |
| gtctgctgtg | gggagtcagg | gcccggctct | caccadetge | ctcctccact | cagcattcca | 480 |
| aaatgeteet | tgtgccctgg | atacctca | actttqqqta | ttgataagcc | gatggatttg | 540 |
| tggaccaaat | aagaatattc | atattacctc | cttcttctaa | cttgccctat | ttgcaaaagc | 600 |
| agttttttta | taacaactat | tagatactat | cagaceteca | cggacagcaa | agtggtttta | 660 |
| acttttgtag | aaggatcctt | cttaacctct | tatctcaaga | gctctgggaa | gtggaagcat | 720 |
| atgeaageee | cggtggacca | gggtggtaag | tatctacaca | tctacctatc | cctgtatcag | 780 |
| ggggtgggat | ccttccaaac | cactcaccac | agtacccgtg | gcactgggcc | cgcagaagca | 840 |
| eggetaceca | tggttcttgg | aagtaatgtc | atcttataac | attagcctag | gacaatcatt | 900 |
| agggatgact | agttattgat | catttactaa | ataacccatt | gattettae | ctcatcctct | 960 |
| gtgggtaggt | tcagagttga | attettatet | ctatagactt | ccaatcagaa | gtctcactgg | 1020 |
| tacccatggg | ggtgggggca | adcadaadac | atggatggga | acctgagtag | gtagtgtggc | 1080 |
| rggggcrggg | gcacaacctt | tacagactaa | cttgctaagt | ctgacagtga | caaacttgtg | 1140 |
| caayayacca | gtcagtcaca | gaggetgtet | tttcacacac | ccttcatgcc | cggctttccc | 1200 |
| agetactgca | tgcagagggc | gaggttgttaa | aactacaggg | aagcgtgaaa | tgatggcttt | 1260 |
| gatagatatt | tactggggtaa | cccactata | acactgtcct | tttcatgtga | tgtggaaacc | 1320 |
| tacttctctc | ctccaaacca | tgaaatgtgt | catctagact | gcagagtact | tgagtgcttt | 1380 |
| geeteegee | atgccagagc | ttataatcca | aagcccattc | ctgtgtgtcc | gtcctgccat | 1440 |
| ttagggagag | aaggctgcgg | agtgagggg | cagctagcct | ggccagtggc | tgtcccgtgg | 1500 |
| accuacacct | gcgccccctt | ctgcaagcag | gattttctgg | tgccaacact | cattcatcat | 1560 |
| tecegatae | ctaggatgaa | tttaagactg | tgctaccatg | tgttctcaag | tggtagttta | 1620 |
| aaaagtggat | tttaaagtg | cctttcaatt | gtctgtgaac | gtctaaagga | ctgatttgtc | 1680 |
| | aaaaaaaaaa | | • | | | 1702 |
| Coadadaa | | | | | | |
| <210> 1387 | 1 | | | | | |
| <211> 1720 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1387 | 7 | | | . tt manataga | aaatteetea | 60 |
| ggcagaggco | c cgtttcatcc | tttcctgcct | tettaagate | cegeactyce | adactected | 120 |
| ctccttcacc | ttcaggctct | tttgtcctct | ccctaaaaac | agaaactaaa | ttatcaactt | 180 |
| gaccttttaa | a tgttactgtc | ctcttctgt | tettetgte | tanataataa | ttctccagecc | 240 |
| accatctcca | a tttttcacct | ttaacccatt | ctgaactcat | tyaattatyt | ttcatcaagt | 300 |
| accatactac | tgaaacaggt | categgtgae | attacataca | alyayaccac attttatata | ttcacctctc | 360 |
| ggtctcatct | t tcattcctct c attctactcc | teceaettea | gtacagrage | actetteact | atcttccctt | 420 |
| accttgccac | c attetacted c ctccttcgct | attactatat | tottttaaa | . getgeedage | ccctagggtt | 480 |
| ccattctca | g tetttaceet | ttattacatt | tetecagga | tagtgagctt | gtagcccgaa | 540 |
| ctgacctcag | c totacotaca | . cccccacgcc | gaacattatt | tttatttatt | tatatattt | 600 |
| gactgcatto | t aaatgeetta | gaactattat | ataccccttt | ctattaaggg | ccctcttt | 660 |
| aaatagatti | a tagegeeaca | tactygyaty | . utacgeete | ctgaagttac | ctgatttgtg | 720 |
| cttaaccaga | c tattttcaac | cageegeeae | tgatccctta | tgattatcac | ccttacttaa | 780 |
| actettgee | t gacttatgtt | atatatata | atctactacc | aaagtgtaaa | acattattcc | 840 |
| gtattacca | t tarctaactg | . gtctctgtgg | aatttatact | cctaattqtt | tatcagaaat | 900 |
| catatotaa | a attagcatga | ccaaaactaa | attccccaa | aagaactgct | ctttttcttc | 960 |
| tasataaa | a attagcatga a atattttccc | cataactcta | ctcgacattc | taaccaaaaa | ctttttgttt | 1020 |
| tattaggat | t teetttetee | : attatactet | ctactcccaa | gcaatttccc | cttcagtctt | 1080 |
| ctctctctt | a gaaaatcato | cactcactca | catgtttgct | gaagccaaaa | tttagcagt | 1140 |
| tatettat | c attracerte | cagtcaggag | acagttatt | gaacagagag | g aatttttag | 1200 |
| aaagaattg | . accompact | | . aaatamataa | ctgaaaaagt | aaaaagaaaa | 1260 |
| adagaacty | t gaactaggta | a aaaadtadci | , aaatayatat | | | |
| сдаадатат | c atggagttaa | a aaactggaag | g aagcaacaac | c cacctgtagg | g gctgggagaa | 1320 |
| caggaagaa | c atggagttaa a agattggaac | a aaactggaag : aaataagact | g aagcaacaac : tagaaactta | cacctgtagg a atgaagaggg | g gctgggagaa g cttgtggaac | 1380 |
| caggaagaa | c atggagttaa a agattggaac | a aaactggaag : aaataagact | g aagcaacaac : tagaaactta | cacctgtagg a atgaagaggg | g gctgggagaa g cttgtggaac ctgtgataaa | |

| gctggttctc caaaggctga gaaaagtgcc aactgtattt agttgctctt aaggaaagaa gtgctgctgc agggatgaga agccttgcca ggggtgacag tcacaggaac acaagcaagc ccacaggaag cagttaggga ggaagcagcc atggtgtctt ccatccaggg ccagcaggca aagctgatgc gtagtgtgca gagtccttgg tgcagcatcc caaagcacag tatagaaggg tggggttaga gatgacaaaa aaaaaaaaa aaaactcgta | 1500 1560 1620 1680 1720 |
|--|---|
| <210> 1388 <211> 505 <212> DNA <213> Homo sapiens | |
| <pre><400> 1388 ggcacgagca gctgtttcta tggtaatttt ttgttcattg ttatcactta tagcttactc tattatggct tttttaaaaa aaaatctctg tatattttct catccttact tgtttgctta cttttctaac cattagtcta aattgacatt taggtaaatt tgcttttaag ttgaatactt aagccaatga ttcagtcatt ttgtcttttc tggggtgggt agtgcctact agacatttaa ttgtgctgca ttttaatatt tcttaccatt cattataaac tttttttt</pre> | 60 120 180 240 300 360 420 480 505 |
| <210> 1389 <211> 485 <212> DNA <213> Homo sapiens | |
| <pre><400> 1389 ggcacgaggt tatgtacata tcattgttaa tacagtcctg gcattctgta catatatgta ttacatttct acattttaa tactcacatg ggcttatgca ttaagtttaa ttgtgataaa tttgtgctgt tccagtatat gcaatacact ttaatgttt attcttgtac ataaaaatgt gcaatatgga gatgtataca gtctttacta tattaggttt ataaacagtt ttaagaattt catccttttg ccaaaatggt ggagtatgta attggtaaat cataaatcct gtggtgaatg gtggtgtact ttaaagctgt caccatgtta tatttcttt taagacatta atttagtaat tttatatttg ggaaaataaa ggtttttaat tttattta</pre> | 60 120 180 240 300 360 420 480 485 |
| <210> 1390 <211> 2007 <212> DNA <213> Homo sapiens | |
| cggcacgagt gaactcctga cctcaagtga tgctcctgcc tcagcctcac aaagtgtggg gattacaggt gtgagccacc gcacctggcc agaaaaagag aaaataattt ttattataga ttatcagtag ttatgtatat taatgaagat ttatgecttca ttatgaatagt tatgaatagt aatagacttg aattgtact ttatattaca cagttggcc tctgtacctg caggttctgc atcctgggat tcaactgtggg atcaaaaata tttgggggaa aaaataattc ttagggggaa aaaataattc ttagggggaa aaaataatac caagttggcc ttacatggca tttacattat aagtaaccta gagattgact atggaggact tggaactaat tttggatgga tgcaaatat gccatatgag ggactggaa acccagggat tttggtgtc tggagctce tggaactaat cacctgtgga tactgaggga aactgtaat taatgtag gtgggttgga gtagagaata tgctttcag accatttcaattg gcggggggga aatgttaga ttcacaataa cgtgagtact tggtactaaa tggaagagaa tgcttcaagt gtggacagta tggtactaaa tagaaagtgg ctgaatgaga aactgtaat taaattgca gaagatgtg ttatatgcc gacattatt gggtttccc ccctcaggc gaagctgagg aactgtaat tactgatgta ttctgatact gacattatt ggcgtttccc ccctcaggca gaagctgagg aacatgtaat tactgatgta ttctgatact gtcagagaga atgatgatga agaaaatgaa agacctgctg aacacagatct gcaggcatgt ttctcaatt gtcttttga tttttattcc attgttcca tacatatgca gaaattgatc ataatcatgg gtatttttag gttattatcc gtttttaatgcc ttctcaatt gtttttattca tttttattcc attgttcca ttctcaatt gttttttattcc attgttcca ttctcaatt gttttttattca ttttttattcc attgttcca ttctcaatt gttttttattca ttttttattcc attgttcca ttctcaatt gttttttatt gtttttattcca ttttttattcca ttttttattcca ttctcaatt gttttttattca ttttttattcca ttttttattcca ttctcaatt gttttttattca ttttttattcca tttttttattcca ttttttattcca ttttttattcca ttttttattcca ttttttattca ttttttattcca ttttttattcca ttttttattca ttttttattca ttttttattca ttttttattca ttttttattattattattattattattattattattat | 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 |

```
atttaactgt ttccatactg gtttatagaa tacttaaaac tatgttatgg ctttctttgt
                                                                     1080
gaaaagaaat atcaataatg gttgcttgta gtttaacatg ggtttaaagt attcaaacta
                                                                     1140
aggettaege atgaeteaaa acceataate ttaaaaagat tgatgggttt gaceacetaa
                                                                     1200
aagtttaaaa cctgtgtata agaaaaggca tcataaataa agttaagaga aatagccagc
                                                                     1260
tggaaaaact gtttattata tatgggcaga ggattcatct cattacatag agcactcata
                                                                     1320
tatttggaag aacagaggat aaaaagatat gagtggactg ttaatggcaa aataatacaa
                                                                     1380
atggccatta aatatttgaa gagataatta gcctcattaa taatttaatc agattggtga
                                                                     1440
ataatgtgca tcgctgtcca agctgtgaga acactcatgc agtgtacatg aaaatgtaaa
                                                                     1500
ttggtacagc tttctggagg gcagactggt gatatggatc aaaatgaaaa acatgcattc
                                                                     1560
ccttgataca gcaattctac ttccaggaaa ttaattttaa ggaaatagtg gggaaagtaa
                                                                     1620
atatgcaact ataaagatgt ttagtatagc attgtttatc tggaaaaaca tcatacaact
                                                                     1680
taaatattca ttccctgtta ttaagtaatg atgcatccat acagtgaaaa cactacagcc
                                                                     1740
atttaaaagg atgaagtaaa tctttataca ttaaaagaga aaaaaagttg ctgtaactag
                                                                     1800
ttaagtgtgt ctcactgcac ttgtaaggtt aataataatt atttggaaca gctcatctag
                                                                     1860
tagacattga atgctgctaa agattctgca ggtcagagat ctatgtgtaa caggttaaaa
                                                                     1920
gcgtagcaac aaagcagtgt acagaatata gagaaaaatt aatttaaaac attctagata
                                                                     1980
                                                                     2007
cgtcttttta aaaaaaaaa aaaaaaa
<210> 1391
<211> 1499
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (867)
 <223> n equals a,t,g, or c
 <400> 1391
ggcgacaagt gacttaaaca ctctgtgccc agttttccgc atctgcaaaa tggggagata
                                                                        60
 aatagcccct acctcctagg atcatcatga gaatgaggtg tgcgaacttg gccggcatgg
                                                                       120
 gttccatagc aggcactcag gggtgtcggc cacgaagatt attctttctc ttctctttt
                                                                       180
 geogtettat tteatetete teegttattt ggtteeeetg teettagtee eettteteee
                                                                       240
 ccaatggcat cccaagatgc acaatagtgg caagtgccca gcctgtttcc acagcctgat
                                                                       300
 ccccaccact gcgttggcca gtcacccaag aagcagctgg accccatcat ctggctctag
                                                                       360
 ggatgaccca gttccagcac ccccgcaaac ctccgtctgt cccctacct ccctcagcag
                                                                       420
 aggcccagcc caatgcaggc ccgtggctgg atgggagtag ctcttcccac caccctggg
                                                                       480
 cagggetetg eggagettgg gageeteace tggaategge ceteatgeet cagtagagaa
                                                                       540
 ggagagcgag gagagaggtg atggggctcc gcgggcaccc ccgatgcaca gtctccttct
                                                                       600
 gggcttctga tggccacaag gccagaagac ctgcccagaa gaattcagta taacccagtt
                                                                       660
 cagtgaaatt ggagagaacg agggcctgcg tcttccgggc agaaggcagg gttcctgccc
                                                                       720
 tetggageee ttggeetgge gegggetgat taggacetaa atetgeetgg gtggetgggt
                                                                       780
 ggccgagtgg cgattgggct ggttctgtac cgggtgtgct ccgtgggggg cgtgatctgg
                                                                       840
 caaagcettg gaggtgggac tgtggangca ccattgattg aactgtgtcc cctgcaattc
                                                                       900
 acatgttgaa gcccaaaccc ccattgtggc tgcatttgga gtagggcagt aattatggtt
                                                                       960
 aaatgaggtc gtatgggcgg gtgctgatcc actaggatta ggatccttat aagaacctgc
                                                                      1020
 caccttetet etgecacgtg aggacatggg gaggaggegg etgeeteeca eccaggagga
                                                                      1080
 gcccttactg gacactgggc cctggctgca ccttgacctt ggacttctag tccccagaac
                                                                      1140
 tgtgagaagt agatttctgc tgattacgct ttcctgtctg cggcctgagc taagacagca
                                                                      1200
 gcgcttgggg agaagcagaa tttgaggagc tcctcagtgg caggctgccc tggccctgct
                                                                      1260
 gtcagcagag gggaatggcc atccatgctg gcccctcacc agccgggcct tcagtgagct
                                                                      1320
 ccccgggtag gtgaagetet cccagetetg tgtcccccge caaageagge ccacaagega
                                                                      1380
 gegeetatgg ggtggagtga gagtgaggaa gaaacattae eegaggggte aetetettea
                                                                      1440
 gaagacctca atgactgtag actactgaat tatttcctta aaaaaaaaa aaaaaaaaa
                                                                      1499
  <210> 1392
 <211> 1626
 <212> DNA
  <213> Homo sapiens
  <400> 1392
```

```
ggcacgagct gcagtctccc tagcatctgt tatttattga ctttttaata acagccattc
tgaccgctgt gaaatggtat ctcattatgg ttttgatttg catttctcta attgttagtg
                                                                      120
                                                                      180
atgtggaaca ttttttcata tgtttgttgg ctccttgtat gtcttctttt gagaagtgtc
                                                                      240
tgttcatgtc ttttgcccag ttttaaatgg gatttgtttt ttgcttgttc acttgttcac
actttttttt tttttataga ttctggatgt tagacctttg tcagatgcat aatttgcgaa
                                                                      300
                                                                      360
cattttttct attttgtagg ttgtctgttt actccactga aagtttcttt tgtagtgcag
aagctcttta attaggtctc acttgtcaat ttttattttt gttgcagttg cttttaagca
                                                                      420
cttagtcata aattctttcc cagagccgat atctagaatg gtgtttccta ggttttcttg
                                                                      480
                                                                      540
taaaattctt atagtttgag gtcttacact taaatattta atccatcttg agttaatttt
tgtatatggt gaaaggtagg ggtcctttca ccatagaata aaacgttgtt tcattctttt
                                                                      600
gcatatggct agccagctat ctcagcacca tttactgaat agggaatcct ttccccattg
                                                                      660
                                                                      720
cctatttttt gttgactttg tcaaagaaca ggtggctgta ggtgtacagc tttatttctg
                                                                      780
ggttctcaat tctgttccct tggtctgttt gtctgctttt gtaccagtac catgctgttt
gggttactgt agctttatag tatagtataa agtcaggtaa tgtgatgcct cagctttgtt
                                                                      840
                                                                      900
ctttttgctt gggattgctt tggttatttg ggttcttttt tggttccata tgaatttcag
                                                                      960
aatagttttt tctagttctg tgaaaaatga cactggtcat ttgataggaa taacattgaa
                                                                     1020
tctatagatt gctttgagaa gtatagccat tttaacaata ttgattcttg taatccatga
                                                                     1080
gcatggaatg tttttccatt tgtctgtgtc atctgtgatt tctttcagca gtgtttccta
gttctctttg taaagatcct tcacctcctt ggttagatgt atttctaggt actttgtttt
                                                                     1140
                                                                     1200
tttgatggct atcgtaaaca ggattgtgtt cttcatttgg ctctctagct tggatgttat
tggtgtatag aaatgctact gatttttgta cattgatttt gtatcctgaa actttaccaa
                                                                     1260
agttgtatgt cagttccagg agccttttgg tggagtcctt agggtttccc atgtgcagaa
                                                                     1320
tctcatgatt ccttaaaagc atgcatttct acttaaacca tcatgtttac ttttctagag
                                                                     1380
agcaattaac ttggaggtgg gtgccgggga ggttaggttg cttttgtaat attaatggat
                                                                     1440
gtacaccaag aatattgctt ctgagaatga tcttatcctc attgggaaag atttttctgt
                                                                     1500
ttttagttga aattgagatg aaatacatct tattataaat aaattttgac tcttactaat
                                                                     1560
gattacagga ttgtagacaa ttaactgtct tcctcatgct gagtacataa aaaaaaaaa
                                                                      1620
                                                                      1626
aaaaaa
<210> 1393
<211> 2397
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (155)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1195)
 <223> n equals a,t,g, or c
 <400> 1393
                                                                        60
 cttttttttt tttttttag gttgaatcaa agcaagttgt cttcagagac tgggatccga
 gatagaaaac acacagtgaa gtttaatcag gaacccaacc tccggtcctc tgctacaacc
                                                                       120
                                                                       180
 acggaaacgg ctccaaactt gaggggggac ccccnaacgc ctgcttttgg cccaaagctc
                                                                       240
 tgccttccag ccctcctcat acccactggc cacctaggac caggaaaggg gggtagagcc
 ctgagaattc tgggtctggg gtcaccagct cccacacctg tgctccccgg ccccacacac
                                                                       300
 atgatgccca ggggtgggca atccctgaca gcggtggccg gcacttggga gctcctgctc
                                                                       360
                                                                       420
 agccacctgc cacggcccac cctgggggtc cggcaggagc cagggcagtg catggcagca
 taaggccccg ctgcagatcg actgccttca gaaacaaaaa gtcccggcgc aaaggcgttc
                                                                       480
 ccggagtggc agcctggcct gcaccccagc tgtgctgccc ctgcagagcc ccagcagcga
                                                                       540
 gscacaccca ggtcagggga gggggcttgg gtaccagggg cctcactggc tcttcaccag
                                                                       600
                                                                       660
 gaccetgtag agtgagaage tgaggaetge ggccaeggeg geceegaeaa eeeceageag
                                                                       720
 ccccggagc cagaaggaag agggatgcag ctctgcgtgg accaaatgtg ggaaggcggc
                                                                       780
 catggtggcg agctgggtga agatggtggt gctgggctcg gctgggccag cacaggagaa
                                                                       840
 cggcacggga gcgggtagcc ggtgcttgcg gcaaaactcg gccggtgatg ggccagacac
 cgcgacactt cgggcaggtc ggccttggag gagacaaaga ggcagggggt ctgcccgtcc
                                                                       900
                                                                       960
 atgtaatggt gcttgtagac gctggcacaa tgtgcaaagg actttgggtc actgccatca
```

60

```
aacatcaagc aggcaacgtc acaggtggcg tccagcgatg tggccagcag accatctgtg
                                                                    1020
cccacctcac agaggatcaa gtacttctcc tgcccattga cctgcaccgt gtcgatggcg
                                                                    1080
tagccgggag gctgctccct cgtgtcctgg tgccccaggc cgcggccgag aaaggcctgc
                                                                    1140
                                                                    1200
aggaaggcag acttgcccac tccacgggcc cctaccacct tgcacaggag gamgntccgc
tgcgtctgtc ccttctcctg gtccagcctc ttctcacgag tgactgtgat ggcatgggcc
                                                                    1260
tggtcctgct cacagagggt ggggtagccc aggtagccta ggtgtccaag gcagctccgg
                                                                    1320
acgtccaggt aggtcaccag ggtccactgg cagaggtatc cgtgcagggg caaccggccg
                                                                    1380
gcctctgtgc ggactgtgcg tgggagctcg gggccccagg gcgctgctgg gaacacactg
                                                                    1440
aaaaggettt geageteeac gggegagagg gegeegtege ggteetggte gtgettetea
                                                                    1500
aacactctct gcacaaactg gtagccaagg tggttgagct ccgtgctgca gccggggggc
                                                                    1560
acgtggatca gaggggagag atagtccgca gtcagctcca gggcatcgct gtagccgaag
                                                                    1620
cgccgcagga tggtccaggt ggtctcgtgc cggccgcgct ggatgaagag cgtgttcagg
                                                                    1680
aagaggaaac ctgcaccgag acaaagcagg gggagcacca ggcacagccc cctccccaca
                                                                    1740
ctccccaggc acaggcggcc acccggcctc accatccagg gtcagcyggt cctcccgcac
                                                                    1800
geogeoegee acatteetge acaccacegt etteacgtee tecagggeet geggggeeag
                                                                    1860
ggggtgccya aagcaggatt tctggaaagc gttgagctct tcgtcactga gcgcctggtc
                                                                    1920
caggtcctga tctgagagcc tgaagatgcg cgtcagcgcc tgggcgcacg cgggcctcaa
                                                                    1980
ctgcttggcc tcagggtcat agaggggggc tgtgggatgc aggacggcct tctgggcgta
                                                                    2040
gtagaacagc tetgagatgt teetcaggtt ettggeegaa caetecaege aggtetcaat
                                                                    2100
ctcgggaaac tggctcatga tggggagcac ggcctccatg gagctccccg accgcaggtc
                                                                    2160
tgacttgttg cccactagga tgatgggcac cctgggcccc tgcgtggtcc ccccattcac
                                                                    2220
cagtgggatc cacttagttc gaatcttctc aatggtggcc tcctcagaga cgtcatacac
                                                                    2280
cacacacac acgtttgcct tgtggatctc ctcccgcagc tcctcgtccg tctgctcggc
                                                                    2340
ttctgagtag tccacgatgt gggtgggcac cttctccggg gtgacgtccc tcgtgcc
                                                                    2397
<210> 1394
<211> 641
<212> DNA
<213> Homo sapiens
<400> 1394
ggcacgagtt tccttgctac tttgctttgg tgtaagcaga gttctttctg taggtttttt
                                                                       60
caaatgaaaa cattgcaaga atatcaaaga gagcagtgtt tgcgttagtg attataaact
                                                                      120
gcagcatggt gctgacattg ataactgaaa gtcaactaat gagaatttga gacttctgaa
                                                                      180
gtacacttag ttgctagtgt ctcccttttg gtgtcactgg aaagtttaga aagcatggtt
                                                                      240
ttgtttttgc tcaggtttct ctttctgtga tgcagagact ctcagctgtt cctcctctat
                                                                      300
gtctacatta tgtctgaagg aaagaattta acaaaacttg aaatactgct gtttttctac
                                                                      360
aatgtttgta aatatttatc ttgctgcttt tctaggtttg tcttctggat ttaaaatttg
                                                                      420
 gggcggctgg ggtggaattg catggtttgg gaatgggtaa ttgagctgct gctcattatg
                                                                      480
gtatgtaaca gtgatttgtc tgtttaatat gtacaagaac tggaaggtca ataaaatgaa
                                                                      540
 agtggttgtc ttgactgggt aatagtgtta catattttgt taaaagttat acatcttttc
                                                                      600
                                                                      641
 <210> 1395
 <211> 2163
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> SITE
 <222> (2118)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (2136)
 <223> n equals a,t,g, or c
 <400> 1395
                                                                       60
 tttgctgtcc ggctgcctak ggtctgggaa gctcgggcac cctccctctc cggggctcct
 geteceacee eteeggeece eccaeegteg egeteeteea ggetgggeet gtggeegegg
                                                                      120
```

```
tgctttttaa ttttccccca gctcagaatc ttgctgctcg gcccccagga gagcaacaac
tcaacgggaa cgatgtggaa ggtgtcagct ctgctcttcg ttttgggaag cgcgtcgctc
                                                                     240
tgggtcctgg cagaaggagc cagcacaggc cagccagaag atgacactga gactacaggt
                                                                     300
ttggaaggcg gcgttgccat gccaggtgcc gaagatgatg tggtgactcc aggaaccagc
                                                                     360
gaagaccgct ataagtctgg cttgacaact ctggtggcaa caagtgtcaa cagtgtaaca
                                                                     420
ggcattcgca tcgaggatct gccaacttca gaaagcacag tccacgcgca agaacaaagt
                                                                     480
                                                                     540
ccaagcgcca cagcctcaaa cgtggccacc agtcactcca cggagaaagt ggatggagac
acacagacaa cagttgagaa agatggtttg tcaacagtga ccctggttgg aatcatagtt
                                                                     600
ggggtcttac tagccatcgg yttcattggt ggaatcatcg ttgtggttat gcgaaaaatg
                                                                     660
tegggaagge cetaaagage tgaagggtta egecetgetg ceaacgtget taaaaaaaga
                                                                     720
ccgtttctga ctctgtgccc tgtccctgag ctcgtgggag aagatgaccc gtggaacact
                                                                     780
tgcctggccc actcagaatc cacggtgacc tctccgcttg ccaaaataac cgaagaaaga
                                                                     840
ccgttcacca gacttggctc ctctaaacat ttgctgttca aacatgtttt tgaatataca
                                                                     900
ttctataaaa gattatttga aagacaaaat tcatagaaaa tggagcaaaa ctgtataaac
                                                                     960
tgatttgtaa ctaacactgg accattggat cgatattaya tgctgtaacc atgtgtctcc
                                                                    1020
gtctgaccat tcttgttatt gttaaaatgc agaggaatct ggaaatattt atatccacgg
                                                                    1080
agtccttgga tccagtgcta cgtcagtaaa tagcaccagc attttgcaat tgctgatctg
                                                                    1140
ctgaaatgta cacattctgg tctagtttgg tctatctttt aaagcctgat ctggtgtgaa
                                                                    1200
taatcaacta ggaaatctaa acttggataa cacgtggtga acaactgcct ttagctggtc
                                                                    1260
cagattaatc atttcaaaga catccatttt agatcacaag caggaagtcg atagtctcaa
                                                                    1320
aggcactttg tttctcccaa gtaggccacc aggcagcctc tagagttgct ttacccaaat
                                                                    1380
cettetecag ceatgacttg gtgactetaa gettgetece acetgeeece tecaettece
                                                                    1440
tcagatgatg aggagccagg gctaaggggg cagccttctc tcttcccagt gatgcacatc
                                                                    1500
cttcacattg gctgctttgt tctggaatat ggatatctca gcctggatgc cgaggaagct
                                                                    1560
gctggatgct taatggtgct agaggctcaa gtgtgtttga aaccaagagc cagttgtccc
                                                                    1620
ccatgcagaa agaaatcctg tgtgagcctc tggtatgaga aataaaatct gccagtttta
                                                                    1680
taacattcac tttctgcctc tgaggaaaga tacagggaac aaaaatcaat ttgtacagtc
                                                                    1740
ttaatattaa aagcagcttg actaaatacc tgatttaaaa atagaagaca tccccagtcc
                                                                    1800
tcatgacata ccgcaaatat ctgtggggtc ctgttgaaaa gaacaaaata aaggagccca
                                                                    1860
aggggtcatt ctgtctcagc accatccagc ctggcacttc tcttcccata tatccattgg
                                                                    1920
atttttttt ttttttcct aaacaaagtt tttacactga gcagatgctc tgtcatgatg
                                                                    1980
2040
aactcgaggg ggggcccggw cccaattgcc ctatagggag tcgtattaca attcactgsc
                                                                    2100
cgcgttttac aacgtcgnga ctgggaaaac cctggngtta cccaacttaa tcgccttgca
                                                                    2160
                                                                    2163
gaa
 <210> 1396
 <211> 1312
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> SITE
·<222> (1168)
 <223> n equals a,t,g, or c
 <400> 1396
 ttgcaggaat tcggcacagt cacggcatcc cactctgttc tgccgaggac gtgaatcttt
                                                                       60
 cetttgttca gtatatecca tgetgtatae actacetgce tgtcagtcat teagtagegg
                                                                      120
 cctatgttat cagattggct gatcattgta ttgcagtgct atgttcaggt aacacttatt
                                                                      180
 ttacttatag tggtcccaag gtgcaagagt agtgatgctg acatattatt ataacttcta
                                                                      240
 ttttattatt cttattgtta atcttactat gcctaattta taaattaaac ttaatcatag
                                                                      300
 gtatatatat ataggaaaaa catagtgtta tatagggttc aatactagcc ccagtttcag
                                                                      360
 ttgggggtct tggaatgtgc ccccacaga taagagggga ctatattctt atagaagaag
                                                                      420
 agtttgattt tttaggacgt tatttcctgt tcaaaccatt gacccactct ttgagataag
                                                                      480
 ttattctgaa gctttcatat aagtaaaagc aattaaattt tgccaccagc accatcctca
                                                                      540
 accattctga attataaagt gttaaaatta agaacaggaa gaatggaagt attcaataaa
                                                                      600
 aaatgaagta ttttcagttc catattgtca tcaaataagg gtgggaaagg caaaggagaa
                                                                      660
 aatcaataag tatggagaag aaagaaatga gtagatagaa caaaaaagat gagaaaggaa
                                                                      720
                                                                      780
 gccatattga agtcaggaga gagtgcagag caagaaagga tgggcagaaa aaaagaaaac
 aagaaaggag tttaatgagt gagtagaatg tgctcttgtt gcattctact gccagtctaa
                                                                      840
```

180

| gccatggaat | agttcactat | tctgggaagt | attcttaaga | tcatcagtga | ccttcaggtc | 900 |
|------------------------|--------------------------|------------|--------------|--------------|--------------|------|
| atgaaatcta | ataagcattc | tttcagacct | gttcttattt | gacctctcag | tggtgtttga | 960 |
| cactctcaac | caccaactct | ttgtgaaacc | ttttttccc | tgaaagctgt | gaggtcgtgc | 1020 |
| tttctcaatt | ctcttctcat | gtctctggta | actcctgctt | tgtctacttt | gggttttttg | 1080 |
| ttttattta | ktttttgktt | tttaagagtt | gggatcttgc | tctgctgcct | aggctggagt | 1140 |
| acaataacac | aatcatagct | cactgcancc | tcacactyct | gggcttaagt | gatctacctg | 1200 |
| ccttggccty | ctaagtaact | gtgttcattt | gacacagttt | aggaactaaa | gatcaggtaa | 1260 |
| aaccagccag | ttcctgagct | ggaattgaat | ctgttcagaa | tgtctgggaa | ct | 1312 |
| | | | | | | |
| <210> 1397 | | | | | | |
| <211> 1966 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1397 | | | | togggatagt | actaacceta | 60 |
| ctgttcctgg | cggagcgggc | teegetegte | talagtet | caygyctygt | ccctcaac | 120 |
| cccacgccta | gggctccggc | gegteaeggg | ceteagetgg | aggagagag | cacccaacad | 180 |
| ggccacgaga | ctcggacatc | tttccaggaa | cagegragg | aggacagaag | acassaggs | 240 |
| gactgctcaa | gccacctgcg | aacactgctg | etaccatgcc | caayayaaay | actcaattat | 300 |
| atgctaaagg | tgataaagca | aaggrgaagg | acgagecaea | aaaggagatca | gcccggccgc | 360 |
| ctgctaaacc | agctcctcca | aaaccagagc | ccaggcctaa | tagaaagat | gcaaagaagg | 420 |
| gagagaagct | tcccaaaggg | agaaagggga | aaycayacyc | aggaaaggac | actoggato | 480 |
| ctgcaaaaaa | ccgagatgcc | tetacaetee | agteccagaa | taactctact | atttaaaata | 540 |
| ccaagtgaaa | tgtacatttt | tgagagetet | gtacttatag | gacttttta | agttatgttg | 600 |
| ctatttttt | aaatcaagtt | ttataaaagt | ttataaaaa | ggcccccca | actaataggg | 660 |
| ttagcacaca | ggacacttcc | regetgeet | cigiggaaag | tttctctcct | actuatuggg | 720 |
| tgtatctcag | aaactgaatt | gaaataaggg | aaaacayyac | gagattgagg | tatcaaccac | 780 |
| gattgttctt | gattcccttg | atteccayga | gagactete | gacactcacg | tttccccgat | 840 |
| tttggcacgg | aagccttaca | grgrggggaa | ccaaaacttt | gegeeeeee | tagcaaccct | 900 |
| gccatcagca | tagacttgac | tteettaaae | cgagagetet | tastascata | gagatagtat | 960 |
| aaaatcagct | gtgttaggta | acaaaactca | ggetttetgt | tcatcctact | gagatggtgt | 1020 |
| cacttaaaag | agccaagatt | cetgitica | gurguggar | catacatast | atasatata | 1080 |
| tagtccctcc | atgtcaaagt | gggcctgaga | adageteata | catatettet | taacttttac | 1140 |
| caccctctct | gaaaatcttt | cityttcaaa | ttataaaata | ttatagattg | ttgcctattt | 1200 |
| ggtgactttt | ggaggagggg gtaaatgttt | agiliggaaa | tastatasaa | ctgaatacaa | attaatttaa | 1260 |
| cctgctgaaa | tttcctaccc | ccaaaaagca | atatattett | tactgccttg | tggaaatttt | 1320 |
| ggggagatec | ctttcacatt | tatatttaat | ctatactact | ctgattttg | tgaaaattat | 1380 |
| atagttttgc | ttcaacttaa | catttttcat | attogaagto | attatatata | cactatttac | 1440 |
| gagttagaaa | atcetttee | cactcatta | taacactocc | tettteataa | attaaatttt | 1500 |
| tgaaaagtt | tgtgggtctt | ttgatgattt | ctattctgac | tgacatcaat | ttgtctaatc | 1560 |
| tgtgtatgtg | acagtacagt | cctgatggtt | gcaactttag | gaaaaggtct | gataaaaacc | 1620 |
| nagatagata | cacattttgt | cataattota | accaatttca | cctctatctc | cagtatcacc | 1680 |
| aagatgttt | tetteettgg | antatettaa | ctattcttag | ccaactgttc | ctccatatta | 1740 |
| attatagaat | tagaccaaca | atttataaat | caaacaaacc | caagagcatt | gaaattttga | 1800 |
| ttagattta | attgaattta | tagattaato | togtaaacca | tgtcatcttt | acaatgttgt | 1860 |
| attacaata | accyddicco | tacacetett | catttactta | ggcctttgaa | atatctttca | 1920 |
| ataaagttt | a taattttctc | caeageeeee | аааааааааа | aaattc | | 1966 |
| acaaagccca | a caacccccc | Cudadaaaa | | | | |
| <210> 1398 | 3 | | | | | |
| <211> 1726 | | | | | | |
| <211> 1/2 <212> DNA | | | | | | |
| <213> Home | | | | | | |
| 1215° 110111 | | | | | | |
| <400> 1398 | 8 | | | | | |
| ggcacgagt | t gaggaggagg | gagcgcttga | aggggactgg | cctggcgtgc | actccgcacc | 60 |
| tcggggaca | t tattgcgcgt | ggaacggctg | , cttttggaag | , gcacaacttc | : ctgaatggac | 120 |
| catgactcc | c accaaagato | cctgtctctg | , attcaccaaa | ı cagcttcaac | cctgaaacca | 180 |
| ggacgagaa | g ttgacaacat | ctgagtggac | : agctaattga | ı cctaagactt | : cagaccaggc | 240 |
| ctatataat | c tcctgtctaa | acattcttag | , agtattatat | : ttactttggg | gactattggc | 300 |
| cttgtctgc | t ttgactcaga | ttataggata | tataacctgg | , ttaatgtttc | tgtacacatg | 360 |
| _ = | | | | | | |

| | | | | +~~+~~~~~ | aaaaaataa | 420 |
|--|------------|-------------|--------------------------|------------|--------------------------|------------|
| atggccacct | atgtatatac | acttgacttt | teagggtete | | yyaaaaacay | 480 |
| ttcattagcc | aaactctcct | aaagtgtggc | aatggaggca | gteteteaga | Lightygatt | 540 |
| tgtcaccatc | ttccaagggc | cattcaagat | cattacatgc | tacttgttgc | accagagatt | 600 |
| gatttttctg | acactccaaa | tgttaccata | tacttacatc | agttccctcc | aaatgtcact | 660 |
| ttccaaattc | aaattcagct | tctaaagcca | ggccatattt | tcattctgtg | cttagtaata | 720 |
| agccctaagt | ctcacccttc | cccaccgccc | ccaggtctat | ctatcagtaa | gccaattagg | 720 780 |
| gacaaattct | ctaacttatc | tagaacacaa | acttaattcc | tcatctttc | caggtecetg | 840 |
| cacattcctg | gcctcccacc | gttactgtca | taactggcaa | ctgaatgtcc | aaaggagaaa | 900 |
| aagcaaagca | gattgtgcca | gcacgtctca | tttgttatat | atcatgctta | tgcaggcctt | |
| tgtaaggcct | gcagtaaaac | caatccatgg | ctcactcatg | ttttaaacaa | cttacctatt | 960 |
| caaactatta | tgaatgaata | gttaagagat | acattttggt | atgtggcatt | gggccacacc | 1020 |
| caccaactca | aggatgggca | catagtgtaa | atagctggca | aaatagctgg | caaattgaag | 1080 |
| ggcgcttttt | tttttttt | ttttgaggga | gagtcttgct | ctttcgccta | ggttgtagtg | 1140 |
| ggtggtgtga | catggctcac | tacagccttg | acctcctggg | ctcagggatc | Ctcctacctt | 1200 |
| agccttccga | gtactgggcc | aaggagtctg | tgcagtagca | tcaagagcct | gtgccttaca | 1260 |
| tcaacacctc | gggtgaagta | gagacttgca | cagaaagaat | ttccaagcaa | gctaaatggt | 1320 |
| tacagaggca | caaactactg | atcttctcaa | tgactattta | ttggcttcct | atttcttcca | 1380 |
| gtctgcagtt | caaccccttt | ttcatgggta | aagtgccgac | gtcataacaa | ggtttgaggg | 1440 |
| aggcactttc | accgtgtgaa | tgcccagtca | tcacacttac | aaatgacaaa | aggattcaaa | 1500 |
| ccttgatata | gtctctatcc | tactttctta | ctatcactta | aattactcat | ggtatttata | 1560 |
| accacttacq | taagtctatt | gctaaaacca | aattataggt | caggtgcagt | ggctcacatt | 1620 |
| caatcctagc | acttgggagg | ccaaggtggg | aagactgctt | gaggctagga | gtttgagacc | 1680 |
| agcgtgggca | atgcagtgaa | accctatctt | gataaaaaaa | aaaaaa | | 1726 |
| | | | | | | |
| <210> 1399 | | | | | | |
| <211> 2006 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1399 | | | | | | |
| ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | aggaactgaa | aagaaatgct | gagacaggaa | atctgcctca | ttcgtaccgg | 60 |
| ggcacagetg | ttgtcagtca | cattggtagc | acttcttctt | caggtcatta | cattagtgat | 120 |
| atatatasas | ttaagaagca | accataattt | acttacaatq | acctggaggt | atcaaaaatc | 180 |
| gracargata | ccgtgcaagt | gatcgagatc | ggagtggcta | catcttcttt | tatatgcaca | 240 |
| caagaggctg | tgatgagctg | ctagagacaa | aaaagaactc | tcagtcactt | agcacggaag | 300 |
| tagagatett | tacccgtcag | ecctcataaa | gaacaaactc | ctagattagc | agcatgcact | 360 |
| rastattat | tactgctgcc | cacctcacct | ttcctctact | gaaggagaat | ttggaattct | 420 |
| gcatattegt | ggagcaacaa | acactcacc | accasaccas | aagacaaaaa | ttggagtaac | 480 |
| actigatect | ccatgctatt | ttatqqaaac | tttggtctca | catccgtage | tgattatcct | 540 |
| gtagaatget | tatgagtggc | acttctttta | tettaggaat | acatottota | aatatatatc | 600 |
| tatatatata | tgtatacaca | cacacagaca | cacacacaca | cacacaggat | gaatggagcc | 660 |
| thereases | aggatgagcc | accadagatat | acctactcaa | aattaatagc | acagcagttt | 720 |
| ccaaagagcc | tgaaggtgtc | aaagaatcca | ttcacctgag | aaatgtgtga | agacatactt | 780 |
| ggagaagaaa | ttttagcttt | tatattaatt | gagtagtttc | actcaagtct | gtaacctttt | 840 |
| accagingge | ettegtee | ttcactcccc | agcagetet | tcatgttaca | ctaatgacag | 900 |
| gtgttteett | attagtaaaa | gaggattac | tatcacctaa | cttgaggagg | tgttttgttg | 960 |
| tttgttetet | ctgcaagaga | ggggcattac | tgatgtcttt | actatttaca | tgcagtccca | 1020 |
| ctgttgttgt | tattaataat | ttagaattty | ttacagtccc | acatttgata | tttcttatat | 1080 |
| agaaatggat | cyclygryct | atttattasa | acadtatatt | catcatatat | catcatcatt | 1140 |
| actitgttt | toocaayyay | atatttta | ttttttata | ttctascata | gagcagcatt | 1200 |
| attatggtgg | Ladayataga | acception | capatagasa | rataatatt | ctccaattgg | 1260 |
| accctaatgg | attgcaacca | tagggataa | . caaytayada | accatctctc | tetetearac | 1320 |
| gactccccag | caggaatact | cayyyaraay | yaayaatyCt kaaagataaa | atteteese | tctctcarac | 1380 |
| atagggagga | taagaagagt | gktettetgg | radayctada | accetygacc | actgaagcta ttgggcattt | 1440 |
| | racaaatata | аааггаасга | CLLUAUCLAE | auuacaaacc | LLYGGLALLL | |

1500

1560

1620

1680

1740

1800 1860

aaagccctat tgcaagtatg aaattaagta cttgagctat aggacaaacc ttgggcattt

aaccatttac tgtctggctt tgcccttaaa atagggttgc aattaaaatg tgattggctt

aggtaatccc aaaaactaac aaataacaaa ggtgcataat ttatttatct actttttagg

tgctctgagt tgaggcaaag tagagcggca acattaagtg ctatgctagt cacttagctg

acgtaaccag cttggttaag cagcttatga aaccatataa agaattcttt tgaggatgga

attctgtcca caaaataatt ttgtgagccc agatatcatt aggatcacac agagttaaat

atagaaaaat gaaaccatca ttatattctt tcgtgttttt tcttttatta taaacaaggg

gattattctt tagttctcag aggtagggac aaaaccacat caggttttca gaaggaaaaa

| | | | | | | 1020 |
|----------------------|----------------------------|------------------------------|-----------------------------|-----------------------------|----------------------------|--------------|
| acatttaaaa | acccaccatc | acatgagaga | atcacttgaa | cccaggaggc | agaggttgca | 1920 1980 |
| gtgagctgag | atcgcatcat | tgcactgcag | tetgagtgae | agagtgagac | ccaccecac | 2006 |
| taaaaaaaaa | aaaaaaaaa | ctcgag | | | | |
| <210> 1400 | | | | | | |
| <211> 1175 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1400 | ttcacaacag | asasaacccs | aacccaaata | cageteegta | atctcctaga | 60 |
| ggcacaggtc | aacccacgga | taactaaaaa | tggtctgaaa | aggtcctggc | cctggggagg | 120 |
| taacttcctc | gctgctgact | accaaaaaaa | ccctggcctg | gatccatgct | gggcagaagc | 180 |
| agetggaeae | tgaccaggac | ccccagggc | cggagaacca | agcttgacag | cccccagac | 240 |
| aatacacaga | acctagaccc | agacgagacc | tccccacccc | cccatctttg | tccccaccag | 300 |
| gacaaagagg | tcttgccagt | cttcccactg | ggccatggtg | ccagctgtcc | ccctagttct | 360 420 |
| cctgccaggg | accccaaggc | tgggaccacc | ccgccagcct | gatgccccag | accacacaca | 480 |
| gcggcaactt | ttctgccacg | gcagccccct | ctagtggaca | agaccccat | gccgcggagg | 540 |
| cgggggctgg | aggcttgtgg ggcccaggtc | agecetteee | tacacccaca | gaagetgeag | ctaatactaa | 600 |
| ggcgggggcc | cagcctggcc | tcgcaggcac | tagaacatag | qctcccggac | cccggcagcc | 660 |
| tectagtaca | ctccttccag | cagctcggcc | gcatcgactc | cctgagcgag | cagatttcct | 720 |
| teetagagga | gcagctgggg | tcctgctcct | gcaaaagact | cgtgactgcc | cagcgcccca | 780 |
| ggctggacto | agcccctcac | geegeeetge | agcccccatg | cccctgccca | acatgetggg | 840 |
| ggtccagaac | ccacctcqqq | gtgactgagc | ggaaggccag | gcagggcctt | ceteetette | 900 960 |
| ctcctcccct | tcctcgggag | gctccccaga | ccctggcatg | ggatgggctg | aaggccaggt | 1020 |
| tgtgaatcca | cccctggcta ctgagggaag | ccccaccct | ggetaceeca | cctggcatccc | atggceagge | 1080 |
| gggccctcag | ctgagggaag cggaggctgg | gracgagere | agtagagact | gctgcctgac | ccccagcaca | 1140 |
| ataaaaatga | aacgtgaaaa | aaaaaaaaaa | aaaaa | 33 | - | 1175 |
| a caaaaa s | | | | | | |
| <210> 1401 | | | | | | |
| <211> 1402 | 2 | | | | | |
| <212> DNA <213> Homo | ganiens | | | | | |
| <213> HOM | saprens | | | | | |
| <400> 1403 | L | | | | | 60 |
| ggcacgagad | gctctggacg | agcgaccagc | aggacgacga | tggcggcgaa | ggcaacaatt | 60 120 |
| aaggcccca | g gggaactggc | agcgcacgcg | gatgctacta | t ctgcagtctt | tattttttc | 180 |
| ccatgagtt | g ggggtcgggt | . gggggaggga | . aagggaggga | tgaccccaaata | agggagaaac ccactagtgg | 240 |
| ccacgacct | tagetgtette tagetgtget | . gategeetet . gatettagaa | tagcagccto | acactggcgt | ctggactgtt | 300 |
| ctgtagatte | atgcaagtgc | , agctgtctgt | ctctaattta | a acttattgct | agataatagg | 360 |
| gttttcaga | . gaaaagaaaa | cttaaagagg | , aatggccctc | : attcagtaag | f ttctgtggtt | 420 |
| ccagtaagg | a tttttatgta | . catacgctct | : cgtctctcgt | : tttgggtact | ttctatctca | 480 |
| tetatetea | r ctctacatat | : tttccagggt | : gtagcctaca | a gacatggaac | agtgtaaatc | 540 600 |
| ccagactga | c agacttagaa | cctgaggtct | cattcatcct | tatggtttag | gccttgccag | 660 |
| ttttccgaa | g tctctgatta | gttgacagta | ttaacactaa | actycaytti - acttttcctt | acagtatttc tgctagttgt | 720 |
| tacattaca | g ccatatgtaa | tcaccaageea | ccaggttggt | tttactatta | atcggtctcc | 780 |
| tagggettea | t gagaatgaaa | a gcgacttcac | g atttttgggt | tcataaggt | ctcggcaagg | 840 |
| taactataa | a aattttttt | ttttggtcct | : tctttcctct | t taacgtaaat | ccaccaccaa | 900 |
| aattattaa | t cctcttgaaa | a agaaaacgtg | g aaacgccaca | a aaaatagaga | a aaattcaggt | 960 |
| ctgtatgtc | a togatcotgt | tggtattttc | c agagaacato | c ccgcttctga | a agctgctgca | 1020 1080 |
| gctccctcc | t cagggatcad | c actgccgtca | a cccactctg | c actggggcgt | ttcctactgc | 1140 |
| gcctcgtgc | t ggcggacgca | a gctgggtgca | a gaagetgtgg | y ggioggagag | g gcgtttggag | 1200 |
| aaggtctgt | g grgcagrgrg | y tyaaaatica - taaccattci | a ggugulagad - gtddaattt | z godlacegy z gagageette | agaaaaaccc g tcagtgtgtc | 1260 |
| aaaaggaag | a golalaloo t coccaaaaa | c actecttee | c caagtaatt | g taggaagata | a aaaaaactgt | 1320 |
| taccagata | a caaacactg | a actcctatt | gaccagaac | t ttttcctct | c aaaaaaaaaa | 1380 |
| | a aaaaaaaaa | | | | | 1402 |
| aaaaacaaa | | | | | | |

```
<210> 1402
<211> 1221
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1220)
<223> n equals a,t,g, or c
<400> 1402
ggatggcgtc ccgcaaggaa ggtaccggct ctactgccac ctcttccagc tccaccgccg
                                                                      60
gcgcacaggg aaaggcaaag gcaaaggcgg ctcgggagat tcagccgtga agcaagtgca
                                                                     120
                                                                     180
gatagatggc cttttccaca gcccctggaa cgtgcttagg atgcatacca gggtacaagc
ttaggaagtg tgggcaccca ccccagccca tggacctgtg tgctccctgc gttgagcctg
                                                                     240
                                                                     300
agatgccatg cttctctcta ctctctctac cactgtggga tcccttggtg attttggttt
                                                                     360
tctgttagta aacttctgtg tttgggatct cgttgtctag acaaataacc accctcatcc
ctgccatctg cccagtgctt cacaccctcg ctacacacag tgtggtcctc ctgtcaggtg
                                                                     420
                                                                     480
tcagcatcac tggagaatat tagaaatgca gagtcttagg ccctatccca gatctaatag
                                                                     540
cttcaaatga atcttcattt ttataagatc ccgagagacc ctgtgcccac tgaagtttga
gaaatgctcc caacttatta ctgccactcc acagctgtca cctcctcagc tccacccaac
                                                                     600
ttccggagtt attgtcatca ccatttcaca agtgaggaaa tgtccattga gattaagagg
                                                                     660
cagagagtaa gagggactca gatcgagatc tgctgccttc cacccagggt ccctgaaata
                                                                     720
ccttggcctg actttccctg tgggtaccag gcaaaaggac acttcgaaga gcttcactga
                                                                     780
                                                                     840
gcaatcgacc tgcccaggcc tcctgagacr tgcaatttam cawwactgtg ggtcacctca
                                                                     900
tccacacctc taacaaagtc acaaggggaa ctggagaaat tcaagatgcc agcaaagaaa
taactgccgg gctgaaagac ttcataattg ccagatggct gaagtgttca gagagtcgga
                                                                     960
                                                                    1020
gctatggaga agggctaatt gatcttgaca tgggctaaga aacaacatya cacctgcggc
aatgactgca agcttttcta gtcccaagag ggaaaggsaa aattctgctc ccaacaatga
                                                                    1080
gagagaaatg gtctccaccc ccagtcagtg gcaacacaga gaggaggtac aagcacaggc
                                                                    1140
                                                                    1200
tgatctgctt gtgaattgtc accacactta actagtcagc tagcctgggg aaagttctga
                                                                    1221
tttattctga gacgtagttn t
<210> 1403
<211> 942
<212> DNA
<213> Homo sapiens
<400> 1403
ggcacgaggg gcttcagact tgagctctgc ctccccagat cgaccgcttc atccccatca
                                                                       60
ccaagctcaa gtattacttt gctgtggaca ccatgtatgt gggcagaaag ctgggcctgc
                                                                      120
                                                                      180
tgttcttccc ctacctacac caggactggg aagtgcagta ccaacaggac accccggtgg
cccccgctt tgacgtcaat gccccggacc tctacattcc agcaatggct ttcatcacct
                                                                      240
acgttttggt ggctggtctt gcgctgggga cccaggatag gttctcccca gacctcctgg
                                                                      300
ggctgcaagc gagctcagcc ctggcctggc tgaccctgga ggtgctggcc atcctgctca
                                                                      360
                                                                      420
gcctctatct ggtcactgtc aacaccgacc tcaccaccat cgacctggtg gccttcttgg
                                                                      480
gctacaaata tgtcgggatg attggcgggg tcctcatggg cctgctcttc gggaagattg
                                                                      540
gctactacct ggtgctgggc tggtgctgcg tagccatctt tgtgttcatg atccggacgc
                                                                      600
 tgcggctgaa gatcttggca gacgcagcag ctgagggggt cccggtgcgt ggggcccgga
 accagctgcg catgtacctg accatggcgg tggcggcggc gcagcctatg ctcatgtact
                                                                      660
 ggctcacctt ccacctggtg cggtgagcgc gcccgctgaa cctcccgctg ctgctgctgc
                                                                      720
 tgctgggggc cactgtggcc gccgaactca tctcctgcct gcaggcccca aggtccaccc
                                                                      780
 tgtctggcca caggcaccgc ctccatccca tgtcccgccc agccccgccc ccaacccaag
                                                                      840
                                                                      900
 gtgctgagag atctccagct gcacaggcca ccgccccagg gcgtggctgt tgttacagaa
                                                                      942
 <210> 1404
 <211> 2103
 <212> DNA
 <213> Homo sapiens
```

```
<220>
<221> SITE
<222> (456)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (457)
<223> n equals a,t,g, or c
<400> 1404
                                                                     60
gttggtgctg ccatccacta aggagacctt caggttcaag ctaactccaa atcctacgaa
gcccttctct tctgctctgt ggctggcagc ccagctcttg taacaaaggc atggaaattg
                                                                    120
                                                                    180
acagcagcta tagccacaat ctgaggaatg gcagacaaga aacagcagag taggcctcaa
                                                                    240
ggagtcactg aagaacccag ggctcctctt tttagctcag agccatttag ctgaaattga
                                                                    300
tgagtggatg gtctttaagt cattctccct tgattggtca gtggcctgtc acagataact
                                                                    360
ggcttgggag ctgcctccat gctcctgagg gtcttcttgg tggttgtcac acagtgtggc
                                                                    420
tgctgagtgg ggacaggctc cttgtgaatg gtgtgctctg tctaacctct ctcattcccg
                                                                    480
ccctcccqac tcaccqacqt gcatgctgcc cacatnnccc ctgcccaaga cacccctgc
                                                                     540
acceceatet geteceeteg tgggeageag gtgeetatge ettgtetace tttetgetee
                                                                     600
tcatccctac agtgagggag actctgatgt ggactcggag ctggaggacc gtgttgacgg
                                                                     660
ggtcaagtcc tggttgtcaa aaaacaaggg accttccaag gcagcttctg atgatggcag
                                                                    720
cttaaagagt tccagcccca ccagctactg gaagtccctt gcccctgatc ggtcagatga
                                                                    780
tgagcacgac cctctcgaca acacctccag accgcgatac tcccacagtt atctgagtga
cagcgacaca gaggccaagc tgacggagac taacgcatag cccaggggag tggttggcag
                                                                     840
                                                                     900
ccctctcacc ccagggcctg tggctgcctg ggcacctctc ccaggaagtg gtggggcacc
                                                                    960
ggtctccccc acccgactgc tgatctgcat gggaaacacc ctgaccttct tctgtcaggg
gcactttcca ggctatgggt gtctgatgtc tccacgtgga agaggtgggg gaaagaggag
                                                                    1020
tttctgaaga gaactttttg ctcctctgtc tcaaaatgcc agactcttgg cttctaccct
                                                                    1080
                                                                    1140
gtgtcaccgt gggcagtggc aggtggcctg gcactgcatg gagccagcac gttgacctcc
ctctcagctc cctgctcagg gacggtggac aggttgccta ctgggacact ctaggttgct
                                                                    1200
1260
gctctctctt cttggtgcct gctgtctttc tactttttaa tttaaatacc caacctctcc
                                                                    1320
atcacagctg catccctgag agtgggaggg ggctgtagtg gtagctgggg ctcccaagaa
                                                                    1380
cgactcggga atgtcatctc catcttcacc cttcagagag cagtcctttc tctgtgcagc
                                                                    1440
tggagacgct ggtgaggaga gccgggtcca ggttcttaag aatgaggtgc ggaggggctc
                                                                    1500
                                                                    1560
tccqqtqctg ctgggctggg ttgagcaagc ctacgcagac aagtgtgtgt gtggaccatc
                                                                    1620
cgcacctcca gcccccaccc caccctcttt gtctcagcgt gttatgtgca atgacctatt
                                                                    1680
taaggtaaac ccattccaac tacagcagtt cagggctgat ccaagcactg cctccctcct
                                                                    1740
gctctgtcca ggtggtctgg accataaact caacttgaga gggaaggctt ggggttgagg
acttgtgatc agaaaaactg aagatggaag ttttggccgg tgctcattag acatgagtcc
                                                                    1800
tcactctgtg tcctgagccc gtgtcattct tccaacctcc ctgccccac acacttatcc
                                                                    1860
cagacacaac accatgtggt ctggaggtcc cagccccac cctaaaaagg ttatccctga
                                                                    1920
                                                                    1980
gaactccacc agacttggga gcccaagtgc agtgcctggt gctgctccca tctgccgccc
cccttctctc ctgcaattgg tttgtactca ctgggctgtg ctctcccctg tttacccgat
                                                                    2040
                                                                    2100
gtatggaaat aaaggccctt ttcctcctga aaaaaaaaa aaaaaaaaa aaaaaaactc
                                                                    2103
gag
<210> 1405
<211> 1255
<212> DNA
<213> Homo sapiens
<400> 1405
aactagtggt atccccggg ctgcaggaat tccgatacat tggtctttaa acccaaaccc
                                                                      60
                                                                     120
cctttaaggc atgttggtct caaggggatt tgggattgaa gcrcagcttt ctgttgagga
aacctaggtg tcacttttta gaacattaaa aagaaagttg tagggtgggc ttttccattt
                                                                     180
aaaggaatgt gatgatccta ggttctgatg agtgataggt ggtctccgtt tatacccttt
                                                                     240
                                                                     300
cttcttttgg cacctgtaag ttccggtagt ggccatctta cattctcatg tcctgctgga
agtgcctagt tgcctgcaaa gccagctaag gcttattatt tcaaaagaag attatttaaa
                                                                     360
```

```
acatgagtga caggtagtca gaagagaaca aaaggacgca agatactcta tagccaagtc
                                                                   420
agcttggagg caggatgggt tgctgagtga agtcgccgct cacttttgga ttcttatgga
                                                                   480
                                                                   540
ctgtgagtta gtcttccctc tacacggagt cacaggaagg gtataaatgc atgttcctga
ggtgccctcc cccaaagaat gtacctgcac tcaaaccagg atctgttttt gctgttttaa
                                                                   600
                                                                   660
tcataaatag actagttagt agaagacttt tgaagaacaa agtaaaactt tttttttca
                                                                   720
ttaaaagatg tcccagagga aaggccctgt gcagccagta tattctaatg actgcctggr
ccatgtccta atawgggtgg ttttaagttg ttgggccaaa aatcctttaa agacatacga
                                                                   780
aacatctgcc aactttttag caaccccaca gagcccgcga mamgctcgct ttcttccccg
                                                                   840
                                                                   900
ccctgcccct ttagtccccg ctctggaags cccaggcagt ttaggtgtaa atasgtatct
                                                                   960
tttatggttt ccaaatgaat tatttgtgtg agagtaatta aatctgtaag aaaacctgtt
                                                                  1020
gagattette acwatgaatt atgaetteta caacatgtat tttagcaaaa acacgatget
                                                                  1080
ggcctccact ggatagctca gtatgctgat tgccagtgat agttctgtac gcgttaccaa
cagcgtcttt attaaccctc tcccacatcc agtggaaatc attgctaggc ggtatttgtt
                                                                  1140
ggttggctgt tagctttgct ttatgatttc atgtttcttt taaaggttgt tttgcatgtt
                                                                  1200
                                                                  1255
qaatattaaa ttttttttt ctgtgtmaaa aaaaaaaaaa aaaaaattct cggcg
<210> 1406
<211> 1642
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1369)
<223> n equals a,t,g, or c
<400> 1406
                                                                    60
tcgacccacg cgtccggtgg aggggaccct gtggttagca gcagctatcg cagcgtcgga
                                                                   120
tgttcagagc agcagaagcc ggcgtcgtcg gatgttgtgt tgcccgccac catgagctac
                                                                   180
acaggetttg tecagggate tgaaaceact ttgcagtega catactegga taccageget
cagcccacct gtgattatgg atatggaact tggaactctg ggacaaatag aggctacgag
                                                                   240
                                                                   300
360
gccacttcac actcttggga aatgcctagc tctgacacaa atgcaaacac tagtgcctcg
                                                                   420
ggtagcgcca gtgccgattc cgttttatcc agaattaacc agcgcttaga tatggtgccg
                                                                   480
catttggaga cagacatgat gcaaggaggc gtgtacggct caggtggaga aaggtatgac
                                                                    540
tcttatgagt cctgcgactc gagggccgtc ctgagtgagc gcgacctgta ccggtcaggc
tatgactaca gcgagcttga ccctgagatg gaaatggcct atgagggcca atacgatgcc
                                                                    600
                                                                    660
taccgcgacc agttccgcat gcgtggcaac gacaccttcg gtcccagggc acagggctgg
                                                                    720
gcccgggatg cccggagcgg ccggccaatg gcctcaggct atgggcgcat gtgggaagac
                                                                    780
cccatggggg cccggggcca gtgcatgtct ggtgcctctc ggctgccctc cctcttctcc
                                                                    840
cagaacatca tccccgagta cggcatgttc cagggcatgc gaggtggggg cgccttcccg
ggcggctccc gctttggttt cgggtttggc aatggcatga agcagatgag gcggacctgg
                                                                    900
                                                                    960
aagacctgga ccacagccga cttccgagtg agtggaggca gccttcccct ctgggaagct
tagttcccac tggggcggag ctaagggccg ggtgccatgc accctgacac ggcttccccc
                                                                   1020
                                                                   1080
ccttatgacc cagaccaaga agaagaagag aaagcagggc ggcagtcctg atgagccaga
                                                                   1140
tagcaaagcc acccgcacgg actgctcgga caacagcgac tcagacaatg atgagggcac
                                                                   1200
cgagggggaa gccacagagg gccttgaagg caccgaggct gtggagaagg gctccagagt
ggtaagtggc tctggctggg cattttctgt ctgcaggcag ggcgagctgg cctaaagagt
                                                                   1260
ggtgctctcc ctgggggcca gaggcaatgc tgtgtcagct ctgcgtgcat ggtgaccagc
                                                                   1320
atggggaggc agtgtggtct ggcasaaagc acaggctgcc tagctggang cacagtttcc
                                                                   1380
ttgttggaaa atgggatgag cccctgtgca ccaggtagtg ggaggatgtg aggtttmtgg
                                                                   1440
cacatagccg ggccttgtca tttaaagcca ttgtaaataa ctgggctact ctgggccacc
                                                                   1500
ctgcctatag gatagccctg ctctgtctat ggagcaagca gctgttttac tatataccgt
                                                                   1560
1620
                                                                   1642
ggcccggtac ccaattcgcc cg
<210> 1407
<211> 1621
<212> DNA
<213> Homo sapiens
```

| <400> 1407 | | | | | | |
|------------|--------------|--------------|--------------|------------------------------|--------------|------|
| 74007 1407 | tagatagtgc | tatgaaacta | attttggcaa | aagactttga | tgaagataga | 60 |
| ggcacgaggc | attgatggaa | ttcaccaatt | tootoatatt | gacaatgttt | cttaagctag | 120 |
| aaataytaaa | tcctttttgg | tttgtagggt | atgatgttgg | tttacttqqa | ataaaatcta | 180 |
| gacccccccc | atagaatatt | gaagetaaaa | ttttacttag | acatccctgt | cctagctctt | 240 |
| tatttataa | taaagaaatt | gaageeaaaa | acatggcaca | caactcaaca | tctaggttta | 300 |
| gannatatt | actggaaacc | tataaaaaac | ctagtactat | atttgcagag | gcatttggga | 360 |
| gcaaacyccc | tagttcccga | cctaggage | cttagccata | ctttctgact | ttcatttcat | 420 |
| tattattag | atcataccgt | actacctccc | ttctcctctt | ccctctaact | ttaaataata | 480 |
| tgttetttee | acttcaaaga | gaacatttca | attttaattc | ctagtattta | ggatctctcg | 540 |
| agetgatta | aaaaaattcg | acactaatct | tagaaataac | tactatttac | cactaaggaa | 600 |
| ttataactta | tctccatgtt | ataaataact | tcaatatact | ttagggttct | agatttcccc | 660 |
| agatagitat | atctgaaaaa | gaaagatgtc | ttagaggagg | aggagaagta | tgggatacat | 720 |
| cagcattggc | ttcttgcctg | acatgaegee | acctatagag | gatgagctgg | gcatttggga | 780 |
| gagetgttea | gagaaaatct | gaccagaaaa | gaaatttcac | tttcttggga | ttcacaggat | 840 |
| ccaaagiiia | taccaacgag | agaggagt | aaagaatgtg | aaggttcagt | tgattatttt | 900 |
| catagagtet | cttggctgta | gaaggcaccc | cttcttcgta | tgactttttc | atttcctqqa | 960 |
| ttaacttggg | caacaaaaca | agaggettag | tatccaaaag | gaatggagta | aacactgcag | 1020 |
| attetettaa | gcacattaga | agaggeeeag | tattctttat | tagataggga | tttagtagtc | 1080 |
| gcaagcagga | gcacgatagt | ttgaatgggg | acacttctac | atgtggtctt | tetettaatt | 1140 |
| atcttaaatg | gtatcccagt | ccgaatgeee | tataatatot | aaagggatta | ctgtagtgca | 1200 |
| cattttttag | tacatatctg | totatasatt | ttagagggt | ttaaaaggatta | tttcttaatq | 1260 |
| aggttgtata | agcatttggc | tacgcyaacc | attacaaccc | atccccaata | taagacgtta | 1320 |
| ttaattctgt | gacgcacttg | tacayytyat | actaactacc | tagatatatt | acaatggaaa | 1380 |
| gtactgtaat | aatgattgaa | notogotttt | tattcaacac | cagacacatc | attatttcct | 1440 |
| agggagaatg | aatgattgaa | aatagatttt | gactaaagag | atattaacta | agtatatcag | 1500 |
| agtttctaaa | tatccttcaa | aatgagaaga | aggetaaagat | gattatttt | cctaagagaa | 1560 |
| cagttgtcta | ccaatattat | tetaccccaa | ttactage | tttgaaaaa | aaaaaaaaaa | 1620 |
| gatagtacaa | actatttaaa | tgtagacgat | tteetggage | cccgaaaaaa | aaaaaaaaa | 1621 |
| a | | | | | | |
| 010 1400 | | | | | | |
| <210> 1408 | | | | | | |
| <211> 1978 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| 400. 1400 | | | | | | |
| <400> 1408 | tgcacatgtg | taaaaaaaaat | taaantataa | tttaaaaaat | aaaaataaat | 60 |
| ggcacgagtt | gaacaaagtc | cccagaact | gagaattagg | taataatcaa | taggaacaga | 120 |
| aaaataatta | gaacaaaguc | caycaytata | ccacaaatta | attctaaagt | cttatttatg | 180 |
| caaatctaat | gttgaaatag | tattaggttg | casttagete | catcaagtga | tagtatccaa | 240 |
| gttctttaat | gtgtccttga | tactagette | teatestest | tttatatctc | tcttctttca | 300 |
| cgtaaaatgg | gcttagcaat | cccccccc | gastassaaa | cacacatett | ttatatcata | 360 |
| cattettgga | gteeccaaca | acayyycaya | taaccatccc | taatacaaa | ttgtgtcgta | 420 |
| tggcttggcc | tccattgaag | caggigaggg | gattatta | . eggedeggdd . aataattdad | agacaggtcc | 480 |
| gggcaggcca | cagtetgget | testages | taccaattt | adtadttgag aatcacttct | caattgctct | 540 |
| gtaccaggcg | gggttetgaa | tgetteeacy | ctaccatcca | gaecacecct | gcaaggtgac | 600 |
| gcagctagga | aagatgtgac | teaggecact | ccggcatcca | ggactcacct | cctcccatat | 660 |
| cctctcgtca | geetgetgta | cagetggge | agestees | . catecetete | cctcccatat | 720 |
| ctgagcgttg | gcctcacagg | cagegreary | aageegtee | taccectgec | cccctttggt | 780 |
| tcaggccaca | gggatgeetg | gagetgggaa | cygeceegeg | , cagcaecgae | tgcagagtct | 840 |
| tcagtgcgtg | tgtctctgtc | cecttaetg | aactytyayc | . geetaaggag | gggccttcca | 900 |
| tctgctagtt | tatecetgga | atglatetea | acycligge | tacqaqaaqt | gttacatgtt | 960 |
| ggatacatta | attgateeta | ayarreraay | atratrosas | . cacgagaaga | agcaaaaatg | 1020 |
| acctgaatgt | agtcgcactg | aggataga | acyattead | · cayougacuc | cctgggctta | 1080 |
| cgccttcata | acgctggaac | deceteege | . cogettigti | , | ttgcagcaga | 1140 |
| tgggatcaga | gcggatggag | atgcggaagc | ggcagatgcc | , cyccyccag | gacacaccag | 1200 |
| gegeegeece | : aggccagccc | ggagcgggga | gtegegggte | . caacycatyc | tgcttctgct | 1260 |
| ggtgctgctg | ttgtagctgc | ccgtgtctca | cigilagaaa | a ccayyaayat | cagaggccca | 1320 |
| caatagctto | ccacgaacto | agagcagatc | : LLCCAACCTG | y yyaayaaayo | cctgctccta | 1380 |
| ctctggaaga | agtcaacgcc | rgggctcagt | . cattigadaa | a tagaassat | actccagcag | 1440 |
| gaaggaatgo | attccgtgaa | . ctcctccgaa | . cayaattcag | , cyayyaaaat a cattattoas | atgctcttct | 1500 |
| ggatggcctg | g cgaggaactg | aaaaayyaag | , claataada | . caccaccyac | a gagaaagcaa | |
| | | | | | | |

```
ggataatcta tgaagactac atttctatac tttctcctaa ggaggtgagc ttagactccc
                                                                   1560
gggtgagaga agtgatcaac agaaacatgg tggagccatc ccaacacata ttcgatgatg
                                                                   1620
ctcaacttca gatttacacc ctgatgcaca gagactcata tcctcgattc atgaactctg
                                                                   1680
ctgtctataa ggacttgctt cagtccttat cggagaaatc tattgaagca taggattttt
                                                                   1740
caaatatatt tattattaat aaaataataa aagaattcat gggctacaac tagcacaggg
                                                                   1800
aatttagagg ttgtagcatc ttctgctgga gtaatactca ggctattcta ataacagatg
                                                                   1860
attecticaa cagactgeta tatatteace atgtaaactg cagecacett tagtgatact
                                                                   1920
tttgaaaaaa aaaaataaag ggatatggct gttgtagaaa aaaaaaaaa aaaaaaaa
                                                                   1978
<210> 1409
<211> 932
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (929)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (932)
<223> n equals a,t,g, or c
<400> 1409
ttccactcct gctttttgtt accagctgtg atgtttggca agttaataaa cctctcaaaa
                                                                      60
cctcacctgt aaaatatgga taacagtaca ataaggtttc akcaaatagt agatgttgtc
                                                                     120
aataatgctt tgttttcttt ggaacatgat aatcttacta gtggcttctt cggcctattc
                                                                     180
tggttgtgac cttgcccttc ctggaacttc ggcgttatga ctgtwcttaa ctgctgaagr
                                                                     240
atggctgrat gtctggaaat ggraaaatct gtsctgtgga tgaaatctta ttaatagatg
                                                                     300
tggragmcac taattagamc accacaactt aaaagagtgt ggatgaatgc ttaatgtctc
                                                                     360
tttaagtcat ggagatggtg ttctgggaaa gaggtgagtg tagtgggggt atgatggcat
                                                                     420
ctgactcctt gttacccact tcctgcagct agatacactg tcagatcctt tggcatccgg
                                                                     480
agaaatgaaa agattgctgt ccactgcaca gttcgagggg ccaaggcaga agaaatcttg
                                                                     540
 gagaagggtc taaaggtgag cctaatcccc taatggagtg atattgatca gcactccttt
                                                                     600
 660
 tacttaagct tctaaaaggc tttttctaca atcagcaggg ttaaactgtt cttggtggtt
                                                                     720
 taaaagatgc ttgaggctgg gcacggtggc tcaacgcctg taatcccaac actttgggag
                                                                     780
 gccaaggcgg ttggatcatt tgtggccagg agttcgagac catcctggcc aacatggtga
                                                                     840
 aacaccatct ctactaaaaa aagataaaaa ttagccgggc ttggtggcgg gstcgrgtag
                                                                     900
                                                                     932
 tccaagcaag agagttccag ttacggtgng cn
 <210> 1410
 <211> 3052
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> SITE
 <222> (2994)
 <223> n equals a,t,g, or c
 <400> 1410
 agegeteeeg eccaecetee ggteteggeg getetecaga gegtetgtaa acaeceagag
                                                                       60
 actgtcatgg agggggagga ggaggcggcg gcggcgaagg gaggcgtttg gggccgcctc
                                                                      120
 cagggtccgc tctgccattc ctgaactggt ccctcgtccc cgtgactctg gcatcaggga
                                                                      180
 agcgaactgt taggcgagag gaggaggcag ccagaaccat atccccttct tcctcggggc
                                                                      240
 gggggccggg ccaggccggc tgagccgggg gagggctccg ggagggagtg cctggccagg
                                                                      300
 ccggcctgtc tgccgcgatg gatgacagta aggtggttgg aggcaaagta aagaagcccg
                                                                      360
 gtaaacgtgg tcggaagcca gccaaaattg acttgaaagc aaaacttgag aggagccggc
                                                                      420
 agagtgcaag agaatgccga gcccgaaaaa agctgagata tcagtatttg gaagagttgg
                                                                      480
```

| | | | | | aaaa | 540 |
|---|-------------|--------------|--------------|--------------|--------------|--------------|
| tatccagtcg a | gaaagagct a | atatgtgccc | tcagagagga | actggaaatg | tacaagcagt | 600 |
| agtacatage a | atggaccaa g | ggaaaaatcc | cttctgaaat | aaaggeeeta | Cicaciggag | 660 |
| aagaggaga C | aaatctcag (| cagaactcaa | gcaggcatac | caaggctggg | aayacayacy | 720 |
| ctaataggaa t | tectootoa a | agattatata | aagatgagtc | agtgattgaa | gecaatatte | 780 |
| trattcccat o | gaagatgga ' | tgggcaagag | tgtacttctt | ggctccattt | actacttact | 840 |
| acteagtagt o | atctctqta (| aatctgcaat | ttctaccaaa | atgtgtgate | gragatetea | 900 |
| aaggatettg c | tttaacttt | caacacttag | aaaatctaca | aacattcaga | cerateraga | 960 |
| ttaatattac c | acccatgac | atttaacatg | ttgtgatgct | tgaaaacaca | ggagtagaga | 1020 |
| aaatcdatda a | gattgtatt | tttqcacctt | aactccacat | tgctttattg | gttaatttat | 1020 |
| attettteea t | gtaattcat | gtaattgtat | gtctgtgtgt | gttttatgtg | Caccacccc | 1140 |
| tratotttt c | rattocccta | caaaqaqaaa | ccaaatgagc | tgattactga | Clataagttc | 1200 |
| tcaccetta t | ggacctaat | cttatttta | tttacttgag | taatgtttat | Localguard | 1260 |
| aaccatgatt t | ctcctgtga | gccattccag | cataagctgt | gaatatgtat | taacaaatat | 1320 |
| atacatttct a | attttataa | tccataagga | tatgcctgtt | ttaaataaca | Lacatattaa | 1380 |
| caatatotat o | raggaaaacc | ctcaagacag | cttctagtta | aaacctttgt | tgetgteete | |
| tcaaactata t | ttataaaaa | tttqctaggg | ccaaatccat | acttgcagaa | taatttatta | 1440 1500 |
| aatttattt t | taaqtqaaa | agtaaccttt | caggcatttc | agcagcatac | attgacaatc | 1560 |
| tagggtatat a | atgtatgtat | atttcttatt | gtatgtctat | atatgtatgt | ggggaggaca | |
| grantraatr 1 | ttcacacact | tttcttqcqt | actcaactaa | attggagaat | gillicigaag | 1620 |
| aaaattogat (| raaattagct | gctgagattg | agtttctgcc | ttaaaatctg | adacadadaa | 1680 |
| adddacaaat | tactaataaa | tctactgact | gtagccatca | ccagaacact | Lagittette | 1740 |
| ccadacatda a | atttcctgac | aggetetgag | ccagaaacac | actgtgggcg | tgcatctggt | 1800 1860 |
| tcadccctdd / | atatocctcc | actotogagg | gaagcattgg | aactggagtt | gtycacayca | 1920 |
| ccacaactaa | tagacctagc | tagagataca | gaagggcagg | gtagttcttt | ecattteece | |
| ttacaactac | acttactttc | tecetgaeta | ccaaatggag | tgacggttga | agaatcaagc | 1980 2040 |
| trataatato | atacacccag | acagacccag | aaatcttttg | atttccccag | Cyayacaccc | 2100 |
| accactctct | attatatta. | ccatggttaa | aacaggagtt | gtgttetety | Legelgelaa | 2160 |
| attattette | acttgagtga | agcaaatatt | tagettecaa | ataaagtata | LLLLgLLCLg | 2220 |
| aactggcagt | ttaagaggag | ataccataat | ctagattgtc | tttgaggtag | aatatatgat | 2280 |
| ggaccata | gtttaagatt | acaaggtact | ttccctcttc | teteaggeea | Lycattigaa | 2340 |
| taaaqtqcct | cccttagcct | gageteetaa | agacctcttg | tacttggttg | Caaactcaga | 2400 |
| tetetagtet | agtetagtet | agtctagtca | tgtgtgactg | tgtactgaga | taccactage | 2460 |
| ccaatttact | gggtctctat | gttttggaag | ttgggggttt | aataatattt | aatgtettt | 2520 |
| taggatgata | aacataaata | aatttattaa | tattcaggcc | ttcagaattt | aayyyttta | 2580 |
| aatataqqat | tcagattgta | attaatatat | ttttgccatc | tggtccactc | aattytatat | 2640 |
| ttttattta | caaaacaacc | caaaacttac | tttatgttgc | tttgttcagt | accititigaa | 2700 |
| ttcccccaga | agagttgttt | tcaaaacaaa | cattccagaa | tgaatgtege | tttttaatgg | 2760 |
| aacotottta | ttgtgcttga | agtatttctt | ctctggttgt | aattctaaat | tacagagica | 2820 |
| tttgagcttt | ctcccctccc | gctagtatct | ttacaggagc | agggaagagc | agtagaggat | 2880 |
| gtataatttt | gggcgaagtt | aaattacaat | ttatttgagg | ttattcctaa | acctatttat | 2940 |
| ttaatattt | ggaggagatc | acacactaag | agaacgttga | ttgcctcggc | tallglycly | 3000 |
| actagacact | ttggtcactt | ttgaagcatg | ttaataaatg | tcactgatta | aaanaaaaa | 3052 |
| aaaaaaaact | cgagggggg | cccgagtacc | caattggccc | tagaagaggc | ga | 3032 |
| <210> 1411 <211> 1280 <212> DNA <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1411 | | | | | | ~ ^ |
| aacacaaacc | acaatattgt | ttttcattta | ctatcttgat | catagagttt | ggctggggag | 60 120 |
| agagagaatt | ttagaggett | ccacttggtg | r ttcctcagaa | tgatatctct | tactccgggg | |
| accaanatan | gggttaggtt | ttattctctt | ; tqtagtttag | , attgtatcto | ttgeettgit | 180 |
| caadttcaca | aatcttttq | tatatacaca | ı tatgtacatç | , aaaatgatgu | teatgettit | 240 |
| tattattta | cccttcatta | tttcatttt | : tatagttctc | : atagctatgu | ctttcagttc | 300 |
| actaatettt | tttccacagt | gtttaatctc | r tcattaatco | catccaaagt | atgttttete | 360 420 |
| tcacaaatto | taatttttaa | cctctaataa | a tttgacatgg | g gtttttccci | gttatatett | |
| tcatatcttt | atttatcato | r gttttacttt | : taacctattt | : atgctttca | atttaaagtg | 480 540 |
| aatatttaat | ggggaacata | cagttgggc | : ttccttttt | t atccagttaa | a caatetetgt | 600 |
| ctttttacta | gggtatttag | atcatttaco | r ttcaatgtat | tgatgtttt: | aggtttaaat | 660 |
| tactaactta | ctatttgttg | , tttattctat | gtcttctttg | g ttctccttt | t cttcttttc | 000 |
| | | | | | | |

| tgctttccct tagagtagct | gagtgtgttt | atattacata | tratataatt | tattaactta | 720 |
|-------------------------|--------------|--------------|--------------|--------------|-------|
| ttaactgtaa atccttgtca | tttgattgct | trarattta | tagcatacat | cattgtgagg | 780 |
| gattgcatat ttatgtcctc | tccaaattta | catottoaao | tcctaatccc | taagggatgg | 840 |
| cattaggaag tgtgaccttt | gazagataat | tacatcttca | aagtggaacc | ctcatgatga | 900 |
| cattaggaag tgtgacctt | ggaaggtaat | acatetega | ttctctttct | ctactetta | 960 |
| gattatgtgt cttatgagac | aacacagaag | agagiligit | cccccccc | tcactggaca | 1020 |
| ccatgtgaag acagaatgag | atgaccatgc | ataaaccagg | aaatggactc | ccactggaca | 1080 |
| ctagacctgc caacaccttg | attgtgtttt | agagtccagt | tctagagact | Ceteageete | |
| tggaacgtga gaaatgaatg | tttgttaagg | cagtcagtca | gtctatggtg | tattttttt | 1140 |
| agtageetga aetgaetgaa | agaaaatcat | gaacttatca | ttctaacttc | aaggacatta | 1200 |
| tatcacttac tgtataataa | aataatctta | cagtaaaaaa | aaaaaaaaa | aaaaaaaaa | 1260 |
| aaaaaaaaaa aaaaaaaaaaa | | | | | 1280 |
| | | | | | |
| <210> 1412 | | | | | |
| <211> 3620 | | | | | |
| <211> 3020 <212> DNA | | | | | |
| - | | | | | |
| <213> Homo sapiens | | | | | |
| 1110 | | | | | |
| <400> 1412 | aa+0a | aaatagggat | ctattatata | atccaaggcg | 60 |
| catatgctgc ctgccctgca | atetgegtae | adatacycat | cogcogcaca | atattacca | 120 |
| aggtgatatt aagctgacgo | : aattggcaat | gctactggca | gagattteta | gtgttgccca | 180 |
| ccagaaagat ggcagcttct | gccctattgt | tatgtgtggt | gactttaatt | ctgtteetgg | 240 |
| ttctccacta tatagtttca | taaaggaagg | aaaattgaat | tatgaaggac | tteccatagg | 300 |
| aaaggtatct ggccaggaad | agtcttcacg | gggacaaaga | attttatcta | ttccaatttg | |
| gccccaaac ctaggtatct | cacagaactg | tgtgtatgag | gtacagcagg | taccaaaagt | 360 |
| agaaaagaca gacagtgatg | tgacacaaac | acagctgaag | caaacagagg | tectagtgae | 420 |
| agetgaaaaa ttgtetteaa | atttacagca | ccatttcagt | ttgtcatctg | tttattcaca | 480 |
| ttactttcct gacactggaa | ttccagaagt | gaccacctgt | cattcccgaa | gtgccataac | 540 |
| tgtggattat attttctact | ctocagaaaa | ggaagatgtt | gctgggcacc | caggagctga | 600 |
| agttgctttg gttggtggc | tgaaacttct | agctagactg | tcacctctta | cagaacaaga | 660 |
| cttatggact gttaatgga | ttccaaacga | aaataactct | tcagatcatc | tgcctttatt | 720 |
| ggcaaagttc agacttgage | totoactoto | tttgatcaca | tactaatttt | ctttccaatt | . 780 |
| tgtattgttt ttcaaagaa | toonattat | taagtatata | catattatt | atttttgcac | 840 |
| tgtattgttt ttcaaagaa | . graaagreer | caagegeacg | tccatatcac | aagaaataac | 900 |
| tgtggagatt ctgaagcgg | talgilagal | gctttgaaac | agaagtgagg | tctaaattct | 960 |
| tttataacaa ttttttta | a taatgaaaaa | tatttttttt | acaagtgage | ttgagagtga | 1020 |
| ctttattgta aaagagatg | t aaaggtttta | tattetaaat | cctagtaaaa | tastaattt | 1080 |
| ttttaaata taatgcatc | t teetttgtet | gcttagtaaa | aaatttcatt | cataattt | 1140 |
| ggcaagctct gtagtggat | c caaagtatct | ttgagttctt | gcaaactaca | agitgitte | 1200 |
| tttccagaag gcttgattt | c attaggagac | ccctctattg | agttctaaat | agtitatett | 1260 |
| agaaagcctt gggtcattc | a caggtatcca | accagccatt | gtttagtttg | tttttgaagg | |
| ggtttgataa tgctttta | a gttgtacaga | atgcttaatc | catcttatta | ctgtcctgag | 1320 |
| ccatgtaata tgcctgcat | c gtgttgggga | . aatgtttggg | aaatataagc | cagcataacg | 1380 |
| totaaagete actettea | c cctqqaacag | acaagaggtg | ggcttaatag | aggcagagac | 1440 |
| tagagatata cctttqttt | c cctagcattt | . ttatttattt | atttttattt | tattttattt | 1500 |
| tttgagatgg agtttcact | c ttattaccca | . ggctgggggt | gcaatggcgc | aatetttget | 1560 |
| cactgcaacc cctgcctcc | c gggctcaagc | gattctcctg | cctcagcctc | tcgagtagct | 1620 |
| gggattacag gcatgcgtc | a ccactcccaq | ctaattttgt | attttcagta | gagacagggt | 1680 |
| ttccccatgt tggttaggc | t ggtctcgaac | tcccaacctc | aggtgatccg | cccacctcag | 1740 |
| ctctcaaagt gctgggatt | a caddcdddao | r ccactgcaca | tggcagcatt | ttttaaaaat | 1800 |
| tcagttttaa gatctctgg | t ttannnnana | gattttattt | tactgaacca | gttctataga | 1860 |
| aatttatttt attaggaaa | t ttatattaa | , aacaaagtgg | cagctataaa | attattttq | 1920 |
| ttaagcctca gaaatatga | ~ ~~~~ | , aacaaagegg | gagagatat | taacttggag | 1980 |
| ttaagcctca gaaatatga | g gaageetgte | t addctctagt | ggggagatat | tttctaaaat | 2040 |
| acctaatgct ctgtaaata | g icaltidado | | , ageggeeeeg | taaaataatt | 2100 |
| gttttctttt accgtgatg | c accagtatga | garggraces | , acactttt | acatassasa | 2160 |
| atgagcaggt ttaataaat | c ctctatacaa | grgeregaat | . caattttada | togtagg | 2220 |
| tggaaatttc cttttttgt | a gacagtagga | a caaggaatta | tatgcattt | . caccaagtag | 2280 |
| taattttaca ctgaattgt | a aatgtttta | a cagtgagttt | : tattaataga | atgetteace | |
| ttaaattgga aaacaataa | t agtcttggac | : taagtctttg | , tactaaagca | tttgctataa | 2340 |
| rratttttaa aaaaacaaa | c agatgaaaac | c ctcagagaaq | , gcatgtggat | : tataagattt | 2400 |
| gtotagtaaa aattgtaat | t gaatatgttt | : aaatatttaa | tttctcattt | tggggggttt | 2460 |
| trafffftt atttttag | a togtotctca | a cgctatcgcc | : caggctggag | f tgcagtggcg | 2520 |
| cgaactcggc tcactgcaa | c ctccgcctc | c tgggttcaag | g caattctcct | tcctcagcct | 2580 |
| | | | | | |

| tattgtgact | attttgccat tcgggctccc ttttaattac aggatattat ttatcccttt tgttgtgtga catccctgaa ttaggcccat | gttggccagg aaagtgctgt agtattaatt gtgccctaat ttaatattgg atttattaac aacctctgtg ttttcatgtg caaatgaagt | ctggtcttga gattacaggc atagttctag tagcagatat ggaaagaaaa aaataacatt aaaatttaat cttcactttg attattttgt | actectgace atgagecace gattteccae agacattate atgaaaatte | atgcctggcc attttatagt aaattataat attagttaat ggtcattgtt ctgattaata tccataaaat ccaaaaagtc | 2640 2700 2760 2820 2880 2940 3000 3060 3120 3180 3240 |
|--|---|--|--|--|--|--|
| cttttgttga attaaatctg ttttaaatgg atcaagataa | ccagaatagt gttaatgcct aaaggtaaac tattcatgtt gctttcctaa aagtcatttg | tggtaactct gaaaccaaat tgtggagtaa tgaaatcttg agaaagtttg | gccagagcct ctctcagtct tgaaattttg tctttatttg agatccagag | gtacttacct caagtgttat gttttactgt gaatttagtt agttcaaggg ggtaataaac | actatccaag accttttgct actgtctgct attggggaaa | 3300 3360 3420 3480 3540 3600 3620 |
| <210> 1413 <211> 1896 <212> DNA <213> Homo | | | | | | |
| tacaacttca | agggattaat | tgacctaacc | ctggataaga | gaactcaaga gtgcgaagac | aayycaayca | 60 120 180 |
| gctcttgaag | gtattaaaaa | tgcactggct | tcaaaaatgc | tgtatgaatt aaaaaggtaa | gagtgatgag | 240 |
| aggagaatga | ctttaactga | agcatctgt | ctttgtattc | agctgggccc | tggaattgaa | 300 |
| caacgtgcag | ttttgaaaac | tettagacca | atcctaaaqa | aaatcatttg | tgatgggtca | 360 |
| actagtatac | aggetaggea | aacttqtqca | acttgctttg | gtgtttgctg | ttttattgcc | 420 |
| acadatdaca | ttactgaact | atactcaact | ctggaatgtt | tggaaaatat | Cilcactaaa | 480 |
| tectatetea | aagagaaaga | cactactgtt | atttgcagca | ctcctaatac | agtgcttcat | 540 |
| atcacctctc | ttcttgcatg | gacactactg | ctgaccatat | gcccaatcaa | tgaagtgaag | 600 660 |
| aaaaaactta | agatgcattt | ccataagctt | ccaagcctcc | : tctcttgtga | tgatgtaaac | 720 |
| atgagatag | ctactaataa | atctttggca | cttctctttg | , aattggccag | aggaacagag | 780 |
| agtgactttt | tttatgaaga | catggagtcc | ttgacgcaga | . accontract | cttggcaaca tttcagagat | 840 |
| gatggaaata | aacaccgggc | caaagtggac | caacadaaag | cattaaattt | tttcagagat ggtcctgaac | 900 |
| gtcctgaggc | taattactaa | gtaaaaaac | acacctatga | cacctttaag | gaagttcttg | 960 |
| gatgagggat | gragtaccac | ttacaatcaa | atgaattcct | : tcgaaatgii | . Lilyaacity | 1020 |
| gaccccagt | gatgettgat | gctgcacgct | taaacgatga | a agattetegt | tegaaayyea | 1080 |
| +++2+2+220 | tetacaacet | tcaaagctcg | aaccaaagct | : agaagcaaat | gicyayataa | 1140 1200 |
| gagagagat | attagagaat | tettetagat | : tttcagaact | : tgaagactat | tttctaattt | 1260 |
| ctatttttt | ttctatttca | atgtatttaa | actctagaca | a cagtttttau | cttggattaa | 1320 |
| cttagataac | ttttgtagca | gtggttatat | : ctctaaatc | ataaacatat | atactattga ataaagtatt | 1380 |
| aactggtgag | rttctgattat | tadatattet tatttatgaa | . ctgtaaatet | a gactgattt | atgatgggga | 1440 |
| aaacaattac | ccaaagttta | atttcttaca | ı ctataattg! | t caagaataci | gatttactat | 1500 |
| aatgatatat | acatgcaaga | ı tatttaactt | : aatatcttag | g acaagagtto | gggtacaat | 1560 |
| tttaaaatct | agttcccctc | r gaaaagctg | : tgtattttt | a atttttaatg | g gaatgtaget | 1620 |
| tttaaaatcc | tatcactag | : atcaacaaaa | a ggaattatac | c catgagacci | tatagetyta | 1680 |
| attasasacc | · attragttra | a gctattggga | a gttcatgate | g aattagcata | tgccagaaay | 1740 1800 |
| attactaacc | traacatoto | r agagcagtaa | a cactgattt | t atctgctgta | a tgagactity | 1860 |
| tgcattttac | tttgaaataa | a agatttttt | . cccactydd | a aaaaaaaaaa | a aaaaaaaaaa | 1896 |
| aaaaaaaaa | a aaaaaaaaaa | a aaaaaaaaaa | adduda | | | |
| <210> 1414 <211> 1361 <212> DNA | | | | | | |

<213> Homo sapiens

| <400> 1414 | 60 |
|--|--|
| agcatttggt ggacttctga gcggtgtcca ccttttagct gtgatgaacg gtgctgttgt gaacacttgt gtacaagttt cagtgtggac gtgtgtcttc gtttctctcg ggtatatacc | 120 |
| gaacacttgt gtacaagttt cagtgtggat gtgtgtete atttgagcag ccgccagcct taaggtggaa tcactgggac tatggtaact gtgtttatte atttgagcag ctgccagct | 180 |
| daaggtggaa tcactgggac tatggtaact gtgtttdete agecttgga gttctgattt gcttteceaa gtgtctgcac catcteacgt cccttectge agecttggga gttctgattt | 240 |
| gctttcccaa gtgtctgcac catcttacyt cocatctttt gtttccagcc catgttgggt cgccacatct ttgccatcac ttgtttttct ctgatctttt gtttccagcc catgttgggt | 300 |
| gcacatct tigccatcac tigittitic cigateteta garactgataa tgttgaacat gtaaagcagt gtcttgtggt tttcatttgc atttccatga tgactgataa tgttgaacat | 360 |
| cttttttgt cttcttggc gatctgtatt tcttctttgg agaaatgtct attccgattc | 420 |
| ttgccactt ttagttggat tattgtcttt ttgttgttgttg tttatgagtt ctttacatca | 480 |
| tctagataga agtgcttcct cacatatatg attcgcaaat atcttctccc attctgtgag | 540 |
| atgtcatttc actttcttga tggtgtcctt tgaggcacaa aacttttaag tttttacgaa | 600 |
| The state of cacting citing calabylady accepted | 660 |
| attatage attatage aggaeactt caaaagtttt tttatttag cicittatt | 720 |
| the makes seteraget the startaget catalog to day tayya coccagood | 780 |
| | 840 |
| the standard that caada taggetate agestate | 900 |
| -managetan attacactar accastarat atatatata tigagetare cedaratage | 960 |
| the transport to the articles and the same transport to the same t | 1020 |
| transport to transport a transferror gatgaaattg addattteet agaaaygege | 1080 |
| | 1140 |
| | 1200 |
| | 1260 |
| gactaggaga gtgggaaatg cttctcaatt cattttatga gaccaatatt actetgatas | 1320 |
| cataatcaga caaagacatt gccaaaaaaa aaaaaaaaaa | 1361 |
| <pre><211> 643 <212> DNA <213> Homo sapiens <400> 1415 ggcacgagac agtccggagg tggggcaggg tgggaaagga tgggaaagga ggcctctaa cttccaatcc ctgcaggc aggacgctt ccatgttgt tgaggccett gtgatcccat ctcttggct ctggaccagtg ccgcttttg gcctatttg ctgaccagtg ccgcttttg aggacctct ctctctgtt ctgaccagtg ccgcttttg aggacctct ctctcaggcc ccgcttttg aggaccgcc ccaggccc ccaggccc aggacctct ctcacagcg cccagccc agcccagagccc ccaggccc ctcacagcgg actctcaaggcccc ccaggccc ctcacagcgg ctcacagcgc ctcacagcgg actctcaggcccc cccagtccaa agcccgcc ttcgccac ttcggcac ttcggcac tccaggccc cccagcca agccctttag gccagctca ttctcacgc gccagctca ttctggcac ttcggcact ccaggccct ccagccagcca agccctctaa ttcggcac ttctggcagt ccagctcct ccagccagt gcccagtca ttctcacgtc gccagctcat ttcggcact ttctggcac ttctggcact ttctcacgtc gccagctcat ttggaatatt ccaccattat gtaaaaaaaa aaaaaaaaaa</pre> | 60 120 180 240 300 360 420 480 540 600 643 |
| <212> DNA <213> Homo sapiens | |
| <400> 1416 | 60 |
| aggagaga ccacgagct ttccccaggc caggggagg accacctaag gattcaayyy | 120 |
| angetactat titcttaatt ctataaacac tcaagtctga gccagcccct cayyaactgc | 180 |
| ctcaaaagag aaaaacaaaa aaaagtcctc cttcccaagg cctgctactc caaggtttgg | 240 |
| ctcaaaagay aaaaacaaaa tadageeeee ttccaactc ctggtctctt atctttgggg ctccatcct tgcctttggg tcctgctat ttccccaactc ctggtctctt aaggaggcct | 300 |
| ctdcateeet tycetteggg teedegecaat cettetaagg egetaagttg aaggaggeet ceaceagtgg ggagteacee gggeeceaat eetetaagg egetaagttg ggagteggg taaaaacagg | 360 |
| tcccagagtg actattggtg ccaaagtccc agttcctgtt ggacttgggg taaaaacagg | 420 |
| agatggtgag tgggtgtaag gcccaaatgc ccagagaagt taactcgaac ccatgggacc | 480 |
| tgtccagcc tgtcagtccc tgatgagtgt aacttccttc ccctgggggc ctggccyttc | 540 |
| totocaacce agtggccatg ctttctcacc cagcettgtg ceeggcetge atttctgtat atattgctgt gtattgtgtg tatgtatgta ttcctggaca agtgtgttca tetgcageec | 600 |
| atattgctgt gtattgtgtg latgtatgta ttcctggaca agegegetes tresses, | |
| | |

```
660
ttgcctgagg ataaggttta ggattgggta aagatcagaa taccagggcc agctaaggca
                                                                     720
acgactecet ecceaaacee ttgggacete agecagtece aaggetgeee tgacaateag
                                                                     780
gcaggetece cacegtgagg ccaageetee tetgecactg ccageatgge ccaagggagg
                                                                     840
cttggccttg ggcttgccag cctcagctct gccctgacaa gggtcttgta tccagggcag
aggcctgagg tgacccaggc ttgctttgtg gctgatgcca gcaggcttgg ttctagtggg
                                                                     900
caccactggt gggcaacctc cataactggc ccttaggccc taccttccta cacagctagg
                                                                     960
ctataatggg cctgagtgag agggtagctt ccccagcccc aagcacaggc agaggggtgg
                                                                    1020
agagcaattt ttggttttat ttttgtttct gaagtggtgc ctgtacctcc agcccccagg
                                                                    1080
gggccttccc tggccacact tctctgcccc acccaggcat cgccatccca gcactttgct
                                                                    1140
                                                                    1200
ccatgtcacc cgtaagatgc cctttgctga atgtacctga gtgtatgtat ttaaaaggac
tcacatgggc atcagagaat ttatggctct gtatccaata aaaaagatgg tgaaactggw
                                                                    1260
1320
                                                                    1323
gag
<210> 1417
<211> 2083
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1781)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (2057)
<223> n equals a,t,g, or c
<400> 1417
ggtgtccttc taatgccatc tctgtagaaa atgtgccctg taagtcagtt tcctggaagc
                                                                      60
                                                                     120
tettetgtgt gttgteett etceageagt gggtegattg teagggagee eaggatggaa
                                                                     180
gctaagtgca ctggtcattg gttgttcttt cagtgccctt cagacagccc ttgccctggt
                                                                     240
ggtcttgtgc cctccctgtc tgtttggtgc ctcttttata aattagtgat gacttcagga
aatggtcctg gatttcaaat agctattcct ggagacattc taattctgtg gtttaaacct
                                                                     300
taaaacaaac aaaccaaagt aattccctgg atattggtgg ctactggtgt gaagagcatg
                                                                     360
gtgcggcgcc tgttacttgg atgagctttg atcaaagaat ggcatcaaat gataacagac
                                                                     420
attggaggta taagtgatta caaggagaat catagatcta aataaaaatg gaatggtggt
                                                                     480
taatacttta attgatcgag atgatacagc aatattttta ttcatatatc agtacaatat
                                                                     540
ttaactttta aaggaagtga tattcatctt agcagaggtc tcttagcacc atatttgcaa
                                                                     600
cattggatgt tatccattga gccttgtttt ggggaggaaa aaagacacca actttcttga
                                                                      660
gtaaattgtt ctctgaaggt gttttacaca ggaatacaaa tttgcctgaa ctcaaaaggg
                                                                      720
                                                                      780
tcttgtttac agtactttaa tcttgttttt cacttcataa gccctctgta aactgaaata
                                                                      840
cagagetaca ggcaaacete attttattge acttagettt attgetettt gaagataete
 tgkttttttt tttttattca aattacagat ttgtggtaac cctgcctcaa acaagtctgt
                                                                      900
 tggtgccatg tttccaataa caggtgctca ctttttgtct ctgtgtcaca ttttagtcat
                                                                      960
 tatctcaata tttcagactt tttcattact ggtatatctg gtatggtgac ctgtggtccc
                                                                     1020
 agatetttga tgttactatk gteattgktt tggggeeeca taameeatge eeatataaeg
                                                                     1080
 tggcaamcct tatcaataag ttttgtgtgk tccgattgct ycatgaaacc agctgttccc
                                                                     1140
 cctctctctc cctcttctcg ggcctcccta ttgcctgaga cacccaatat tgagattatg
                                                                     1200
 ccagttaata accctgcaat gcctctaaat gttcaaatga aaggaagaat ctcatgtctc
                                                                     1260
 tcactttaaa taaaattcta gaaaggatta aacttggtga gaaaggcatg ttgaaagcca
                                                                     1320
 aaatacgctg aaggctagac ctcttgcacc aaacagccaa gttgtgaatg caatgaaaag
                                                                     1380
                                                                     1440
 ttcttgaagg aaattaaaag tgctacttca tagaacacat gaataataag gaaaacacct
 tatttctgat atagagagag ttttaatggt ctggatagaa gatcaaatca gccacaacgt
                                                                     1500
                                                                     1560
 ttccttaagc cgaagccaga gcaaggctct aactctcttc aattctctga aagctgagac
 aggtgaggga gctgcagcca aaaagctgga agctagctga gggtggttta tgaggtttaa
                                                                     1620
                                                                     1680
 gaaaagaagc tatctccgta acataaaagt actagacgaa gcagcaagtg ctgatgtaga
 agctgcagtg agttatccag aagatctagc tgggataatt gataaagcta rctacactaa
                                                                     1740
 acaacacatt ttcactgtaa accaarkagc catctyggaa naaagatgct gtctaggact
                                                                     1800
 ttcttagcta gagagtacga ggcatcgcct tttcttaaag cttgaaagga caagctgacc
                                                                     1860
```

```
cttggtagga gctaatgcag ctagtgacac taaattgaag ttagtgctca ttttcccttc
                                                                     1920
                                                                     1980
tcaaaatcct acggcccttc agaattatcc ttaaatctac tctgcctgtg ctctaggaat
                                                                     2040
ggaactacaa aggctagata acagcacatc tgctgacagc atgatttact gactatttta
                                                                     2083
agcccactat taagacntac tgcttagagg caaaaaaaaa aaa
<210> 1418
<211> 917
<212> DNA
<213> Homo sapiens
<400> 1418
ggcacgaggc tttccggtac aggatacagc tgtgcttctc ctactttgta tttgccatat
                                                                       60
acggatagat acaaaacctc atgactgatt tttccctatt tattttgagt ggctctgtat
                                                                      120
accattttca tgtattactt catttttctg tttttcagtt atgttctctg ttttcgtata
                                                                      180
tttttggaag ctagttctaa gtcatgtttt gtaggaaata agcaatctta aatacatgca
                                                                      240
taggggattt ctttcttctg aggatcctta atttcttcta tttttaagat tcaaattgaa
                                                                      300
tgattaatca gtaacagttt atgttttaaa taaaagtctt taaaatgtta aatatcagcc
                                                                      360
                                                                       420
tttcatttct gatatttggt ctttgaagag gaaacataat gcaatagtaa ttcataatag
tggagggttc tttcctcaca tccttgaaag ccaccagtct tattcttcag cctggctctt
                                                                       480
gagctattgc tgtattaatt ttaaataggt tgtgatagca taagctgatg gaagcctgca
                                                                       540
gagateteae tttgaaatgg tgataeatta catgggaaaa gattagagag gtgttttata
                                                                       600
ctgcacatcg gtgaggccta ataagaaagt agaatagacg taaaccattg ttttcatcat
                                                                       660
                                                                       720
cctttaagac agggatttca gactcaagaa ccaggcagct acctatttaa atgagtcaag
tgggccctaa tgtaagacaa tgtgatgggt aaggattgat tctgagggaa caggagcagg
                                                                       780
                                                                       840
catgccctct ctaacagagg ccgtcagttc tgctgtacct gaaatgtggg cattgttgct
ggcgattcca cacttacatc taaaatttcc tgatttttta agaatgacaa taaccaattt
                                                                       900
                                                                       917
aaaaaaaaa aaaaaaa
<210> 1419
<211> 1014
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
 <222> (820)
 <223> n equals a,t,g, or c
 <400> 1419
 cccacgcgtc cgatttgaga tatttccttt tgattcagac gtaacactgt gctttcaagc
                                                                        60
 ttaacatcct attattttcc tatatatagc tagtgtttat gaaagtttct ctactcctta
                                                                       120
                                                                       180
 tttttaaatc catataaata aagcatttat tggatttata ctgaggttga attaaagaag
                                                                       240
 tgtaagttta tttttagcat cgtgagaagt gtctcactta aggtagtttt taatctggtt
                                                                       300
 gtgtttgcaa tgaaacaata ttagacagtt ttataattga tttctttctt tttcctacca
                                                                       360
 tttcatcagc aagtcccttc agctctttca aaataaaccc tgaatctgat cattgtggtc
 tgaatcacta ttatattttg ccagaactgc tacaatagcc tccaaattct tttttcctct
                                                                       420
 tttcttacac tcaattaatg aaaattttac cttacccaag taaaatcagc tatgcccagt
                                                                       480
 gatcttttaa agacmaatca gattaacatt cacctgctga aaacccttca gtgaatttct
                                                                       540
 gtctcttcta gaataawwtc taaagtcttt attgtggcct ccaatgctct atctagtctg
                                                                       600
 gcccatatct atctctaact gtatctttga tcaatctcta tcttaatcat tgtgttccag
                                                                       660
 gcacactaac catctcgcta ttccttgaat agcatatttc tgtctggaat ggtcaactaa
                                                                       720
 cagcaaagag gacagtgtgg ttggatagga atgagagagg gaggaagagg gtgatgaggt
                                                                       780
                                                                       840
 tacagaggta attaggggaa agattatatg gtcttatagn ccgtagtagt acttttagat
                                                                       900
 ttttctctga aaaaatagag agccatttta gggttttgaa caaaggactg atatcttcca
                                                                       960
 cttgccattt aaaaggatca ttctggctgt tgcattaaga atgactatag aggctgggag
                                                                      1014
 tggtggctca cacctgtagt cccagcactt tgggaggcca aggcgggcag atca
 <210> 1420
 <211> 1720
 <212> DNA
 <213> Homo sapiens
```

```
<400> 1420
                                                                      60
ccacgcgtcc gaaactttgt gctggaatca tgataactgc atctcacaat ccaaagcagg
                                                                     120
ataatggtta taaggtctat tgggataatg gagctcagat catttctcct cacgataaag
ggatttctca agctattgaa gaaaatctag aaccgtggcc tcaagcttgg gacgattctt
                                                                     180
taattgatag cagtccactt ctccacaatc cgagtgcttc catcaataat gactactttg
                                                                     240
aagaccttaa aaagtactgt ttccacagga gcgtgaacag ggagacaaag gtgaagtttg
                                                                     300
tgcacacctc tgtccatggg gtgggtcata gctttgtgca gtcagctttc aaggcttttg
                                                                     360
accttgttcc tcctgaggct gttcctgaac agaaagatcc ggatcctgag tttccaacag
                                                                     420
tgaaataccc gaatcccgaa gaggggaaag gtgtcttgac tttgtctttt gctttggctg
                                                                     480
acaaaaccaa ggccagaatt gttttagcta acgacccgga tgctgataga cttgctgtgg
                                                                     540
cagaaaagca agacagtggt gaatggaggg tgttttcagg caatgagttg ggggccctcc
                                                                     600
                                                                     660
tgggctggtg gctttttaca tcttggaaag agaagaacca ggatcgcagt gctctcaaag
acacgtacat gttgtccagc accgtctcct ccaaaatctt gcgggccatt gccttaaagg
                                                                     720
                                                                     780
aaggttttca ttttgaggaa acattaactg gctttaagtg gatgggaaac agagccaaac
                                                                     840
agctaataga ccaggggaaa actgttttat ttgcatttga agaagctatt ggatacatgt
gctgcccttt tgttctggac aaagatggag tcagtgccgc tgtcataagt gcagagttgg
                                                                     900
                                                                     960
ctagcttcct agcaaccaag aatttgtctt tgtctcagca actaaaggcc atttatgtgg
agtatggcta ccatattact aaagcttcct attttatctg ccatgatcaa gaaaccatta
                                                                    1020
agaaattatt tgaaaacctc agaaactacg atggaaaaaa taattatcca aaagcttgtg
                                                                    1080
gcaaatttga aatttctgcc attagggacc ttacaactgg ctatgatgat agccaacctg
                                                                    1140
ataaaaaagc tgttcttccc actagtaaaa gcagccaaat gatcaccttc acctttgcta
                                                                     1200
atggaggcgt ggccaccatg cgcaccagtg ggacagagcc caaaatcaag tactatgcag
                                                                     1260
agctgtgtgc cccacctggg aacagtgatc ctgagcagct gaagaaggaa ctgaatgaac
                                                                     1320
tggtcagtgc tattgaagaa cattttttcc agccacagaa gtacaatctg cagccaaaag
                                                                     1380
                                                                     1440
cagactaaaa tagtccagcc ttgggtatac ttgcatttac ctacaattaa gctgggttta
acttgttaag caatattttt aagggccaaa tgattcaaaa catcacaggt atttatgtgt
                                                                     1500
tttacaaaga cctacattcc tcattgtttc atgtttgacc tttaaggtga aaaaagaaaa
                                                                     1560
tggccaaacc caacaaacta acattcctac taaaaagttg agcttggaca tattttgaat
                                                                     1620
ttttgtaagt gaagattttt aaactgacta acttaaaaaa atagattgta attgatgtgc
                                                                     1680
                                                                     1720
<210> 1421
 <211> 1730
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> SITE
 <222> (455)
 <223> n equals a,t,g, or c
 <400> 1421
 gggtcgaccc acgcgtccgg aaggatggaa ataggaccct tgagccgatt actccgtgat
                                                                       60
 ggctcagact gcatgcaaag actaggatgg ggctcttgct ctggctcagt gttgggcata
                                                                      120
 cttcccctca gaaggccccc gccaaagagc ttagattttg gcttgggaaa aacattaccc
                                                                      180
 ctcttcagta accctgaagc tctgtatttg gtatttggga ttcaggtagg tcagctgctc
                                                                      240
 atgttgmctg gcccaagtgt gtaagaacaa acagtaatgc cagtcatttt cccactaaga
                                                                      300
 tgttccagtg ggaagggggg ctggtatgaa aaagagaatt ttttttctc tgtgtaatga
                                                                      360
 taactttgtt cacgtagtaa gaattcagtt cttactattg gtgtgaatag ggggtaaata
                                                                      420
 ttatttttat ttaaaagcaa aattaaatac tttcntgaac ctcatccatg tttgcaagta
                                                                      480
 gatgtctact gtggttgcct tttttcctca agagaatatt ttaataaact tgtaagtaat
                                                                      540
 tttgttacat ttttctgtct gcctgtgtac tatgtattaa aactcacatg ggggctttca
                                                                      600
 tgataaaaag ataaactgtt aagcagttgg aaattttcag tgttcttcca gtggacacct
                                                                      660
 gccttggggc aggagcttct ttgtagtcat tattgataga atggggtcac acacattgtg
                                                                      720
 ctcctgcatt aagggcagct ccaaggtttg gcatgagact atgcatgtgt gtggacacgg
                                                                      780
                                                                      840
 aggtttctca gtgagaaaga gtcctaagac agtgaagtgg aacgargcct taaaaatcat
 ctagtcagct gacttccagt ttcaggttct caggctcctt ttggtatttt aggaagccca
                                                                      900
 cattggacta gagagagact tcagaccaag atatcatgtt tatgttcttt tagctagaat
                                                                      960
 tgtgttaagg caatgactat ctcctacagc ttagaagttc tgaagtacat ggccaggagc
                                                                      1020
 ggtggctcam acctgcaatc ccmgcacttt gggaggccga rgcgggtgga tcacccgagc
                                                                      1080
```

```
tcaggagttt gagaccagcc tgggcaagat ggtgaaaccc tgtctctact aaaactgtga
                                                                   1140
                                                                   1200
aaaacacatt agccgagcat ggtgatgcac gcctgtaatc ccagctactt gagaggctgg
                                                                   1260
ggcacaagaa tcacttgagc ctgggaggca gaggttacag tgagccaaga tggtgccagt
ggactccagc ctaggcaaca gagcaagact ctgtctcaaa aaaaaaaaa aaagttctga
                                                                   1320
agtacagtta tatatgtatt tgattaatac aaaagtagag aagttaatca ctccttaaaa
                                                                   1380
aatgcagttt gggaggccag gcacaatggc ttatgcctgt aatcccagta ctttggaagg
                                                                   1440
ccgaggaaag gcggatcact tgagtccagg agtaggagac cagcctgagc aacatggtga
                                                                   1500
aaccccatct ctacaaaaaa tacaaaaatt agctgggtct ggtgacgtgt gcctgtggtc
                                                                   1560
ccagctactt gggagactga ggtaggaggg tcacgtgggc ccaggagatt gagacttcag
                                                                   1620
tgagccatga ttacaccact gcacttcagc ctgggcagca gagtaagacc ctgtctcaaa
                                                                   1680
                                                                    1730
aaaaaaaaa aagggcggcc gctcttaaaa gatccaagct ttacgtttcc
<210> 1422
<211> 2018
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (672)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1609)
<223> n equals a,t,g, or c
<400> 1422
attggctaca aacccactgg tataagcagc agtgtgcctt ctctctaact gtggacaagt
                                                                      60
cgggcatgtg gcgggtgagg agcccccaaa taactcttga actggaaaat aactctttag
                                                                     120
ctatatactg gcagaatatt tgaacaactc tagcaagaaa tgtcagttta gggatgcctc
                                                                     180
ctctaaatgg gggcttagaa tataacattt tgcaggaagt cctttctgat acatagctga
                                                                     240
ctagatgaag gaccagatta acaagttcat gagttgtaaa tataaaagtt gtgtaccacg
                                                                     300
ataaaaaaga aaaagaagta tggctgcact gttgatggct ggtcaaacag cccccaagaa
                                                                     360
tectggggtg actecaatae tgecaeettt tetetgtggg tgeagttgee tgeggatgtg
                                                                     420
tgtgcacatc tgtgcctcgg tatgcacact cgagatgccc gctctcatag acggtgcaga
                                                                     480
gcgtcactgc attcctatct gattaatgtg accttagtgt tgtagataca ctgtgtcact
                                                                     540
ttcatcctcc ctcctcccca caaaagatgc cacgagaact cgtgaactgt gataagcaat
                                                                     600
gaacagaata actgttgaag aagcacctca tgaacctccc cagagaaacg ggatggagga
                                                                     660
gcacccaggg tnctcttgct ctcttgcctg cgctgccatt tccttccagc ctgggtttct
                                                                     720
agctctttgg ggagattccc cgttttgtgg aatgctttct gtgtttccta cttctggatg
                                                                     780
 cctaaggagt ggccagtcat actcctggct gaccactgcc aggcaccgtg gttttcctca
                                                                     840
 ctgaactcaa ggagtcaccc tccgtgggga ggccacactc acagctccag gcctgccatt
                                                                     900
 tagccttggg gcttggctgt aaagttgccc aagaggatta caggagctgc cagccaagtt
                                                                     960
 taatttggcc accttagaga actgcagcaa ggccctatca gcttcccatt agacaaacaa
                                                                    1020
 ctgcatttaa attaaataaa gtttgcacct ctagggagtg ctgacctgaa aataagaacc
                                                                    1080
 ttctgtctgt gattatagag tacacttgct tttattaatt gctgattctt agtttacaaa
                                                                     1140
 aaaaaaaatt agaaaagcat taccatttac tttccaaggg gcaagagatt ctctacaata
                                                                     1200
 cccttccccc aaccctctcc tcaaatttcc aaatcctaaa tactttgaag aaatttgtgt
                                                                     1260
 gactgtttaa aattgagtat ttccttctaa ctattgtctt ttgaaaaggg atggttcacc
                                                                     1320
 aggccagtga tactctatgg actgcatttt gggacctcta ccccagcaag gatacaggtt
                                                                     1380
 cctggggtct tgaagatggg aaaagttgtc tcagaattta cccaaatgtc gttctcacca
                                                                     1440
 taaaagatat acttgtagaa atgagaagct tcagtataac tcaaaacact ggacgcagca
                                                                     1500
 ataactataa acattttaat ttcaaaaaca aaggtgtgtg cgatgttgtg tgcacagtaa
                                                                     1560
 gggttgcggg gcttggagaa caagcacgcg tccctgtgaa gcccgcagng tgctggcggc
                                                                     1620
 ccaccaatcg cctggactac agtgaggagc attgtgtgac tccgcggtgg atttccatgc
                                                                     1680
 accgaatgga ctcagtttct aaactcacat cctaacgtat cctggctttt cacagaatac
                                                                     1740
 tggagacatg actgcatgca tgatcacggt tcttgttgtg aagctgccac catgttacgc
                                                                     1800
 ttaacagctg cataaatatt ataaagaaat agggttttct tgacacttag atttaacctt
                                                                     1860
 aatgcatctg cccagctgat ggtatcagac gtgctgctgt tcatttcttt ttcatggtaa
                                                                     1920
 1980
```

60

<213> Homo sapiens

aaaaaaaaa aaaaaaaaa aaaaaaaaa gggcggcc

| <400> | |
|-------|-----|
| ggtgg | a |
| tgtta | C |
| attgg | |
| attaa | ιt |
| ttcta | ιt |
| gtata | ıa |
| gggag | |
| agtga | ıg |
| tccca | ıg |
| aggaa | ag |
| aaaaa | a C |
| tcatt | t |
| ggtga | ır |
| aaaat | c |
| cttct | -g |
| tecco | ct |
| tccat | t g |
| | |
| <210 | |
| <211: | |
| <212 | > |

ų.

. Junik

hafr

| tgttacttat attgggtgga attaatctct ttctatacct gtataattaa gggaggctaa | ctttactttc aatggccatt ttcccgtttc tgtcattttg aatgttatag gacgggagga atctctacaa | gtacatgtaa tctgccttgg gaacatcata aacaacagga ttgctactcc gctgggtcgg tcgcttgagg aaaaaaaaag | tcctctcata ctctactaac agaagccca caccagccaa gggggctcat ctaggagttc atagccaggc | cccactcctg aaagaccatt caaatcaagt agagggagga gcctgtcatc aagaccaggc atgatggcat | attttaggtg tgagagttag atttcccttg aagtttcttg ccagcacttt tgggcaacat ccatctgtag | 60 120 180 240 300 360 420 |
|--|--|--|--|--|---|--|
| gtataattaa gggaggctaa agtgagaccc tcccagctac aggaagctat aaaaaccaaa tcattttaga ggtgargaaa aaaatcaggt ctcctgtggg | aatgttatag gacgggagga atctctacaa ttgggaggct gatcatgcca aattgttata tatccattca atagacatga ttattgaagt ttttggcaaa attttcttgt tttcaaaaaa | gctgggtcgg | gggggctcat ctaggagttc atagccaggc gatcacttga gcctgggcaa ttgaataact caatagtgtg ctgargctca tacagtaaaa acacaattaa agtcaacaac | gcctgtcatc aagaccaggc atgatggcat gccgagggt tagagcaaga tttctggaat ctggatgcca aratcctccc wttactgttt gatcyagaac tctccccaa | tgggcaacat ccatctgtag ttcaggctgc ctgtctctct gagaaagctc rgaatttaat tctatttta ttagtggaaa atcctgtctc ccccatggcc | 420 |

957 DNA

<213> Homo sapiens

| <400> 1424 | | | | |
|-----------------|------------------|--------------|------------|------------|
| cccacgcgtc cgga | gactga gtggcttaa | a caaaagacat | ttattttctc | acagtcctgg |
| CCCGCGCGCGCC | 5 5 5 5 5 | | tattataaaa | catatatact |

| | | aget at t cac | aggettagtt | tettetaagg | cctctctcct | 120 |
|------------|------------|---------------|------------|---------------|------------|-----|
| aggctggaag | tccaagacca | aggtgttcgc | agggccggcc | at agat gat g | tatattata | 180 |
| tggcttggag | atggccctgg | ttggtcttct | gagtgcaggt | greectiggra | Letteregeg | 240 |
| tatccagatt | ttctcttata | aggacactgg | tgagattgga | tgaggggccc | cctgacggcc | |
| tcatcttaat | greateacet | ctcttatctc | catatccatt | cacatacggg | ccattgcgag | 300 |
| | ttaggggttc | aacacataaa | ttaaaaataa | agagatacag | ctcagcccat | 360 |
| ctaccgggga | Laggggccc | aacacacaaa | ccatccatc | gtagcactta | gaaaaatgat | 420 |
| aaacatgccc | cctctggctc | gctctcccag | ggcacccacc | gtagtatta | agagagatat | 480 |
| cacttctttt | ttggctttgt | ggtggcgtgt | gtgtgtgt | attigialat | acacacacac | 540 |
| atatataaat | acacagacac | acatatatac | aaacacacgc | attcattttc | gtccacagtt | |
| cctaactcat | aactcccaca | gcccttgtta | cactcttttg | ttacaacatt | gggtgtgtca | 600 |
| cccggcccac | gagaatgagt | ctaacctcct | accetteett | ttacctgccc | aagacaggac | 660 |
| ggccccagga | gacaaccacc | tgatggtggg | tcataaaact | cattccagag | acqqtcccac | 720 |
| tctaatcttc | cctacctttc | tyatyytyyy | | aastaaaaa | caadddaact | 780 |
| cccatatcct | gctagaagga | atgctgctgt | catgaagett | CCacaaaac | caaggggace | 840 |
| ggattcagag | agcttccaga | taactgaaca | tacagaggtt | ctagaagggt | ggtgcgccca | |
| addaddacac | aggaagetee | atgcccttcc | ttcatacctc | accctatgca | tctctttatc | 900 |
| tetetet | ataatatoot | ttataataaa | ccagtaaatg | taaaaaaaaa | aaaaaaa | 957 |
| tgtatettt | acaacacccc | ccacaacaaa | | | | |
| | | | , | | | |

<210> 1425 <211> 1034

<212> DNA

<213> Homo sapiens

<400> 1425

| <4007 1423 | | | | | | 60 |
|------------|------------|------------|------------|------------|------------|-----|
| cccacacatc | cottttattt | aatttatact | taagtttgaa | tagccacaca | tggctagtgg | 60 |
| cccacgcgcc | | | ttatastata | cagtetetge | atcatcattc | 120 |
| ctatcatact | ggtcaacatg | ggctatctaa | cccigacgea | cagceceege | | 180 |
| cattttctaa | agtgggtttc | tcccacagca | gttgttaaaa | caaggatttg | gatacaaaga | 180 |
| Cattettaa | ag0955 | | gagaggatt | gaggaggtga | gatggagaag | 240 |
| gattatttaa | gaggtgatee | Lagacagcag | gagagggacc | gugguggugu | 900990900 | 300 |
| gtgaatacta | gtaaaagact | acattgatat | gctgtaggca | cttgaggttt | ctgtttgttt | 300 |
| grgaaracra | gcaaaagarr | | gagttatgga | aaacactota | taattgtttc | 360 |
| atttattat | ttttttggaa | acculcgaga | yacıtatyya | addedeeged | | |

| attgaggagc | acggaactga | tcatgtttat | tcaccaactc | tcatgccttt | ttggttgaag | 420 |
|------------|--------------|------------|------------|--------------|------------|------|
| gatgctccta | ggggcattca | cacctgctct | gaactccttc | ttcatctcca | gcctgcctcc | 480 |
| cttatgggcc | atttcatgcc | actgtaccta | gataaagcct | tagggccaag | agattcaggt | 540 |
| acttaagget | gggtctatcc | ttctgagctg | caaataactt | ccagggtgga | tcaagggaat | 600 |
| atagatcaa | gatagattat | attocctctc | atttacaacc | aaccatatta | gctcatatta | 660 |
| atatttata | tggaatagga | ggagaagcat | ttgagactgt | tagaaaaaag | gttctgctat | 720 |
| ++======== | agttttgaaa | ctgtagctct | aaactacatt | cctacctqtt | ttcctgacca | 780 |
| cctcaattac | taacttgtat | catattccat | attatttcta | gcacagcatg | gattctctaa | 840 |
| cottaattac | gtctgggccc | tacaaggtag | ctgtaaaaat | actaccctaa | gactttctca | 900 |
| ataanaaat | aagaagactc | aaggattca | gaaagtgttt | atttaattaa | cttttattga | 960 |
| grggagacar | aagattagag | addcaccca | aagaaaatca | gagagaacct | atacttggtt | 1020 |
| | | acagcaagag | aagaaaacca | gagagaacc | | 1034 |
| aaaaaaaaa | aaaa | | | | | |
| -010- 1406 | | | | | | |
| <210> 1426 | | | | | | |
| <211> 1150 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| .400- 1406 | | | | | | |
| <400> 1426 | ccacgcgtcc | aattttaata | caadttcaca | gagaatcaac | gttcatggtc | 60 |
| ccgggtcgac | gagactgaga | tatanattaa | taagtteaca | attaacaata | gcgtatccca | 120 |
| ggtgtgatga | agaacatga | cycyaactyc | ccagcagaga | tratracttt | tagaaaaaat | 180 |
| gagtgtactt | agaaacatga | aaacttctt | tatttaatt | ttcatctaaa | acatttacca | 240 |
| ttacagttct | taggaatgca | aatatttgtt | ataagagaat | aattttaata | tatttttcca | 300 |
| gataaagttg | agtccagaga | caactaacta | ataayayaat | aaccccaaca | tttccaataa | 360 |
| ttttggtgtc | aacattgcat | ggattttttt | cettgiteea | tagatatas | attaggetgg | 420 |
| aaacttagca | gttaaaatta | atttgttcca | aatgaaatat | tycatctyaa | attaggetgg | 480 |
| aattgcagta | gacgttcctg | gttcttgcaa | accagaggac | according | ctgtgtggtc | 540 |
| ccaggctctc | ccctctctgg | tttcctgtgt | tecetecetg | cageeteaga | tatagagaga | 600 |
| agggctccac | tgtgcttttc | caaactctca | teettteete | ceaggegree | tgtgtagtat | 660 |
| gccactgcct | ctcacttctc | acatccacag | ctcctgcttg | gtcagtgttc | ctagttgagt | 720 |
| gtcagaaatt | gaacaaccca | attagctggt | atttcatttg | taccaaccta | tgaatggagg | |
| agtagcctta | attcccttgg | gggcttccac | ttctaagaga | actgttttcc | gtccaggtag | 780 |
| gcagacctgt | catggctgaa | gcttcatcac | ctggcctggt | catagccccc | aggccctgta | 840 |
| ggcaggacag | gggcttggca | gattggcatc | cttcccacaa | aagcatgaaa | gtaggatgtc | 900 |
| tgtatgtagc | gacaacaaat | acaagaataa | ggagagttta | acaacattct | caaagttggt | 960 |
| ggaaaagaaa | aagaatcaat | gaaaacatca | ccctaaacca | gctagtgctt | tctgtttaca | 1020 |
| gggatcagac | cccttcccac | ttaaaaaaaa | aaaaaacaaa | aaaaaaaaa | aaaaaaaaa | 1080 |
| aaaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaaa | aaaaaaaaa | 1140 |
| aaaaaaaaaa | | | | | | 1150 |
| | | | | | | |
| <210> 1427 | | | | | | |
| <211> 1761 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1427 | | | | | | 60 |
| ccacgcgtcc | gaagagacct | tgggtaataa | gcttgccact | gagtggctgc | tttatgteet | 120 |
| caagggattg | taccatatca | agcactcagc | attggtgtct | gttgctaatg | gtcaggcatt | 180 |
| cagtagtggt | ggtagctaga | tcagccttgg | agagagagag | cccatcattt | caggecatea | |
| cgactaatco | attcatttat | gggccctttg | taaggattga | . gatggctgag | gacaggggct | 240 |
| gacaggcatt | cattagacca | gtcatcctgt | ccatatgctt | attcagtgct | tcttctgcca | 300 |
| cacgtgctct | ctggtgggct | ctagtgtgag | acacaaagat | caacacatta | tgtgcccatt | 360 |
| cttatagctc | : cagccacatg | cctcttcctc | agacatgctt | ggtttcaatc | ctctagtgtt | 420 |
| gttcccttga | ggcccttgac | caagcaacca | agccattctc | caccacctag | aagtctgtgt | 480 |
| atattcttac | : ttttggccgc | ttctctccag | acacaaagca | gatgaccact | ggacttgaat | 540 |
| tggcacccag | agttattttg | ggtgtgtctt | tagtgcagca | ccagtccatc | tttttagctc | 600 |
| acgccagcat | atcatgctag | cctaatcctt | ataaagccct | tttcctgctc | cttttctatt | 660 |
| ctgtcaactg | tctgtggaga | aatccccaag | gggccatagg | r tattatgtct | ggaattggtt | 720 |
| ctctccgagg | ggttcttggt | ctcgctgact | tcaagaatga | agccatggac | cctcgcagtg | 780 |
| agtgttgcag | , ttcttaaaga | tggtgtgtcc | ggagtttgtg | ttttcagatg | ttcagatgtg | 840 |
| tctggaggag | , tttcttcctt | ctggtgggct | cgtggtctcg | r ctgacttcag | gagtgaagcc | 900 |
| | | | | | | |

```
acagacette acagtgagea ttacagetet taaaggtggt gegteeagag ttgtttgtte
                                                                    960
                                                                   1020
ctcccggtgg gtttgtggtc tcactggctt caggagtgaa gctgcagacc tttgcagtga
                                                                   1080
gtgttacagc tcataaaggt agtgtggacc caaagagtga gcagcagcaa gatttattgt
gaagagtgat agaaaaaagc ttccacagcg tggaagggga cctgagaagg ttgccgccac
                                                                   1140
                                                                   1200
tggctcgggt ggccagcttt tattccctta tttggccccg ccctcatcct cgtgattggt
                                                                   1260
ccattttaca gggtgctgat tgccccattt tacagagtgc tgattggtcc gtttttacag
agtgctgatt ggtgcgttta caaaccttta gttagacaca gagtgctaat tggtgcattt
                                                                   1320
ttacagagtg ctgattggtg catttacaaa cctttggcta gacacagagc gcttattggt
                                                                   1380
                                                                    1440
gcatttacaa tcctttagct aggcagaaaa gttctccaag tccccaccca acccagaagt
ccagctggct tcacttctca atcctccttc taaacaggac accacaagtg ttgttgggaa
                                                                    1500
ttggccgatg accgctctag ctatttcctg ctggataggg gcaaagaagg ggccctgcag
                                                                    1560
ttgtagtgtc ctccagaggg gaactcttta ggccagtgaa agggccagca ggttggtctg
                                                                    1620
gggtcctcag tagaagttgt tagttgagct catttggggt tccatttgta agaccatctg
                                                                    1680
tagcttgatg gcctcaattc tagaggaaac aaatttgaca aggagattaa aaatacaggg
                                                                    1740
                                                                    1761
tccaaaggca aaaaaaaaa a
<210> 1428
<211> 616
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (610)
<223> n equals a,t,g, or c
<400> 1428
ccacgcgtcc gaaaattagt taggcgtggt ggcacacacc tgtaatccca gctacttcgg
                                                                      60
                                                                     120
aggctgaggc acaagaatcg cttgagcccg ggaggtgcag gttgcagtga gccaagatca
caccactgca ctccagcctg ggcagcagag tgagaccgtg tcccaaaaaa gagaaggaga
                                                                     180
aacagagatc atgtggaaaa agttatttt tatttattta cttagttttc agtttggttt
                                                                     240
gagactcgtg ttttaaacca gagggcatgg ttactgaggg ataacatcaa tagaactcct
                                                                     300
ataattgagg ggataattat caaggtatta gatgattcac tggctattac aaagaacaca
                                                                     360
                                                                     420
gaaattatga aacctggttc tgtaacttat agtttttcat attattttta taccatggat
aactcttcta tgtgtattca taggtgtaag attactggca gtgtcatatg aaacaacata
                                                                     480
ttacattttt taagcctgga aagcatctag tatggctgtg cacgtagtga tgacattgac
                                                                     540
600
                                                                     616
aaaaaaaan aaaaaa
 <210> 1429
 <211> 573
 <212> DNA
 <213> Homo sapiens
 <400> 1429
 gctccaaact gttttccata gtggttgtac tgatttagat ttccaccaag agatatgtat
                                                                      60
 gagagttccc ttttctccac attcttgcca gcatttgtta ttgcctgtct tttggataaa
                                                                     120
 agccatttga actagggtga gatgacatct tattgtagtt ttgatttgca tttctctgat
                                                                     180
 gataattatg ttgagcactg atatggtttg gatctgtgtc cccaccaaat ctcatgttga
                                                                     240
 attgtagctc ccagtgttgg aggtggggtc tgctggaggg tggttggatt tctcatgaat
                                                                     300
 agtttcatac tgtcctcttg gtgctgttct tgtgatagtg agttctcatg agatttggtt
                                                                     360
                                                                     420
 atttaaaagc gtacagcacc tccccgctca ctctctcttg ctcctgcttc cgccgtctaa
 gatgccttac tccctctttg ctttctgcca tgattggcag tttcttgagg cctctccaga
                                                                     480
 agcagaagct gctgtgcttc ctgtacagcc tacaaaactg taagccaatt aaaactcttt
                                                                     540
                                                                     573
 tctttataaa aaaaaaaaaa aaagggcggc cgc
 <210> 1430
 <211> 1384
 <212> DNA
 <213> Homo sapiens
```

| ~100 <u>~ 1130</u> | | | | | | |
|---|--|--|--|--|--|---|
| <400> 1430 | cggaggaatt | gctatttaag | tagaaagtac | ttgaacagcc | aaatgagcac | 60 |
| | tattttcact | | | | | 120 |
| | acttctggca | | | | | 180 |
| | tttttttt | | | | | 240 |
| | gcccccaaat | | | | | 300 |
| | aatttttatt | | | | | 360 |
| | tgagcaggtt | | | | | 420 480 |
| | caggtttttg | | | | | 540 |
| | gagtgcctac tattacagga | | | | | 600 |
| | aaaaaattaa | | | | | 660 |
| | gctctaaaat | | | | | 720 |
| | ttatatactt | | | | | 780 |
| tagatattta | aaatgagtga | attgtatggt | acatgaatta | gatctcaata | aaactatttt | 840 |
| aaaaaaagaa | actaaagctt | agagaagtat | aatatcttgt | tcaatatgac | actacctggt | 900 |
| | tccaaatttt | | | | | 960 |
| | attatatagc | | | | | 1020 |
| | ggctcacgcc | | | | | 1080 |
| | ggagtttgag | | | | | 1140 |
| | aaaaaaaaa | | | | | 1200 1260 |
| | ctgaggcatg | | | | | 1320 |
| | cactgcactc | | | | | 1380 |
| | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaaa | 1384 |
| aaaa | | | | | | 2001 |
| <210> 1431 | | | | | | |
| <211> 706 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| ~100× 1131 | | | | | | |
| <400> 1431 | ccatacaaaa | agactgggtg | ctccgagctc | cactcaggtg | aaagaatttg | 60 |
| gcccacgcgt | ccgtgcagag | | | | | 60 120 |
| gcccacgcgt cggcaattgt | tgacgtgaaa | gaagaatctc | attacatctt | ggatccaaag | caagcactga | |
| gcccacgcgt cggcaattgt tgaagctcac | tgacgtgaaa cctaggtact | gaagaatctc gcaggcagtt | attacatctt tatttcccca | ggatccaaag agcattgtac | caagcactga attttgcttg | 120 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg | tgacgtgaaa | gaagaatctc gcaggcagtt attgatggct | attacatctt tatttcccca ctcattacat | ggatccaaag agcattgtac ttagttgtgg | caagcactga attttgcttg ggtgatgtca | 120 180 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc | tgacgtgaaa cctaggtact ggtaaatttt tcattttaag | gaagaatctc gcaggcagtt attgatggct tctttagacc | attacatctt tatttcccca ctcattacat accatcagtc | ggatccaaag agcattgtac ttagttgtgg ataattttca | caagcactga attttgcttg ggtgatgtca aagaagctaa | 120 180 240 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc ttttgtctat tagcccatgg | tgacgtgaaa cctaggtact ggtaaatttt tcattttaag taaatggaac tgggggtaag | gaagaatctc gcaggcagtt attgatggct tctttagacc agaaacttcc agtcccactt | attacatctt tatttcccca ctcattacat accatcagtc tcactctgaa tctaaattgg | ggatccaaag agcattgtac ttagttgtgg ataattttca ttttggataa tgatttctgt | caagcactga attttgcttg ggtgatgtca aagaagctaa gtttgtcatt cacatgtcta | 120 180 240 300 360 420 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc ttttgtctat tagcccatgg aggtagaacc | tgacgtgaaa cctaggtact ggtaaatttt tcattttaag taaatggaac tgggggtaag agctgcaggc | gaagaatctc gcaggcagtt attgatggct tctttagacc agaaacttcc agtcccactt agtggggact | attacatctt tatttcccca ctcattacat accatcagtc tcactctgaa tctaaattgg tggggactag | ggatccaaag agcattgtac ttagttgtgg ataattttca ttttggataa tgatttctgt aacaggcagg | caagcactga attttgcttg ggtgatgtca aagaagctaa gtttgtcatt cacatgtcta gaggtggaga | 120 180 240 300 360 420 480 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc ttttgtctat tagcccatgg aggtagaacc gctattctgg | tgacgtgaaa cctaggtact ggtaaatttt tcattttaag taaatggaac tgggggtaag agctgcaggc tgggatgtcc | gaagaatctc gcaggcagtt attgatggct tctttagacc agaaacttcc agtcccactt agtggggact taggggctga | attacatctt tatttcccca ctcattacat accatcagtc tcactctgaa tctaaattgg tggggactag tgaaagtgag | ggatccaaag agcattgtac ttagttgtgg ataattttca ttttggataa tgatttctgt aacaggcagg ccttgacagc | caagcactga attttgcttg ggtgatgtca aagaagctaa gtttgtcatt cacatgtcta gaggtggaga agctttgttc | 120 180 240 300 360 420 480 540 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc ttttgtctat tagcccatgg aggtagaacc gctattctgg taaaggagct | tgacgtgaaa cctaggtact ggtaaatttt tcattttaag taaatggaac tgggggtaag agctgcaggc tgggatgtcc taaagagaaa | gaagaatctc gcaggcagtt attgatggct tctttagacc agaaacttcc agtcccactt agtggggact taggggctga gcagtggccg | attacatctt tatttcccca ctcattacat accatcagtc tcactctgaa tctaaattgg tggggactag tgaaagtgag ggcgcagtgg | ggatccaaag agcattgtac ttagttgtgg ataatttca ttttggataa tgatttctgt aacaggcagg ccttgacagc ctcacgcctg | caagcactga attttgcttg ggtgatgtca aagaagctaa gtttgtcatt cacatgtcta gaggtggaga agctttgttc taatcccagc | 120 180 240 300 360 420 480 540 600 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc ttttgtctat tagcccatgg aggtagaacc gctattctgg taaaggagct actttgggag | tgacgtgaaa cctaggtact ggtaaatttt tcattttaag taaatggaac tgggggtaag agctgcaggc tgggatgtcc taaagagaaa gccgaggcgg | gaagaatctc gcaggcagtt attgatggct tctttagacc agaaacttcc agtcccactt agtggggact taggggctga gcagtggccg gtggatcacg | attacatctt tatttcccca ctcattacat accatcagtc tcactctgaa tctaaattgg tggggactag tgaaagtgag ggcgcagtgg aggtcaggag | ggatccaaag agcattgtac ttagttgtgg ataatttca ttttggataa tgatttctgt aacaggcagg ccttgacagc ctcacgcctg atcgagacta | caagcactga attttgcttg ggtgatgtca aagaagctaa gtttgtcatt cacatgtcta gaggtggaga agctttgttc taatcccagc | 120 180 240 300 360 420 480 540 600 660 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc ttttgtctat tagcccatgg aggtagaacc gctattctgg taaaggagct actttgggag | tgacgtgaaa cctaggtact ggtaaatttt tcattttaag taaatggaac tgggggtaag agctgcaggc tgggatgtcc taaagagaaa | gaagaatctc gcaggcagtt attgatggct tctttagacc agaaacttcc agtcccactt agtggggact taggggctga gcagtggccg gtggatcacg | attacatctt tatttcccca ctcattacat accatcagtc tcactctgaa tctaaattgg tggggactag tgaaagtgag ggcgcagtgg aggtcaggag | ggatccaaag agcattgtac ttagttgtgg ataatttca ttttggataa tgatttctgt aacaggcagg ccttgacagc ctcacgcctg atcgagacta | caagcactga attttgcttg ggtgatgtca aagaagctaa gtttgtcatt cacatgtcta gaggtggaga agctttgttc taatcccagc | 120 180 240 300 360 420 480 540 600 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc ttttgtctat tagcccatgg aggtagaacc gctattctgg taaaggagct actttgggag tgtggtgaaa | tgacgtgaaa cctaggtact ggtaaatttt tcattttaag taaatggaac tgggggtaag agctgcaggc tgggatgtcc taaagagaaa gccgaggcgg | gaagaatctc gcaggcagtt attgatggct tctttagacc agaaacttcc agtcccactt agtggggact taggggctga gcagtggccg gtggatcacg | attacatctt tatttcccca ctcattacat accatcagtc tcactctgaa tctaaattgg tggggactag tgaaagtgag ggcgcagtgg aggtcaggag | ggatccaaag agcattgtac ttagttgtgg ataatttca ttttggataa tgatttctgt aacaggcagg ccttgacagc ctcacgcctg atcgagacta | caagcactga attttgcttg ggtgatgtca aagaagctaa gtttgtcatt cacatgtcta gaggtggaga agctttgttc taatcccagc | 120 180 240 300 360 420 480 540 600 660 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc ttttgtctat tagcccatgg aggtagaacc gctattctgg taaaggagct actttgggag tgtggtgaaa | tgacgtgaaa cctaggtact ggtaaatttt tcattttaag taaatggaac tgggggtaag agctgcaggc tgggatgtcc taaagagaaa gccgaggcgg | gaagaatctc gcaggcagtt attgatggct tctttagacc agaaacttcc agtcccactt agtggggact taggggctga gcagtggccg gtggatcacg | attacatctt tatttcccca ctcattacat accatcagtc tcactctgaa tctaaattgg tggggactag tgaaagtgag ggcgcagtgg aggtcaggag | ggatccaaag agcattgtac ttagttgtgg ataatttca ttttggataa tgatttctgt aacaggcagg ccttgacagc ctcacgcctg atcgagacta | caagcactga attttgcttg ggtgatgtca aagaagctaa gtttgtcatt cacatgtcta gaggtggaga agctttgttc taatcccagc | 120 180 240 300 360 420 480 540 600 660 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc ttttgtctat tagcccatgg aggtagaacc gctattctgg taaaggagct actttgggag tgtggtgaaa <210> 1432 <211> 419 | tgacgtgaaa cctaggtact ggtaaatttt tcattttaag taaatggaac tgggggtaag agctgcaggc tgggatgtcc taaagagaaa gccgaggcgg | gaagaatctc gcaggcagtt attgatggct tctttagacc agaaacttcc agtcccactt agtggggact taggggctga gcagtggccg gtggatcacg | attacatctt tatttcccca ctcattacat accatcagtc tcactctgaa tctaaattgg tggggactag tgaaagtgag ggcgcagtgg aggtcaggag | ggatccaaag agcattgtac ttagttgtgg ataatttca ttttggataa tgatttctgt aacaggcagg ccttgacagc ctcacgcctg atcgagacta | caagcactga attttgcttg ggtgatgtca aagaagctaa gtttgtcatt cacatgtcta gaggtggaga agctttgttc taatcccagc | 120 180 240 300 360 420 480 540 600 660 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc ttttgtctat tagcccatgg aggtagaacc gctattctgg taaaggagct actttgggag tgtggtgaaa <210> 1432 <211> 419 <212> DNA | tgacgtgaaa cctaggtact ggtaaatttt tcattttaag taaatggaac tgggggtaag agctgcaggc tgggatgtcc taaagagaaa gccgaggcgg ccccgtctct | gaagaatctc gcaggcagtt attgatggct tctttagacc agaaacttcc agtcccactt agtggggact taggggctga gcagtggccg gtggatcacg | attacatctt tatttcccca ctcattacat accatcagtc tcactctgaa tctaaattgg tggggactag tgaaagtgag ggcgcagtgg aggtcaggag | ggatccaaag agcattgtac ttagttgtgg ataatttca ttttggataa tgatttctgt aacaggcagg ccttgacagc ctcacgcctg atcgagacta | caagcactga attttgcttg ggtgatgtca aagaagctaa gtttgtcatt cacatgtcta gaggtggaga agctttgttc taatcccagc | 120 180 240 300 360 420 480 540 600 660 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc ttttgtctat tagcccatgg aggtagaacc gctattctgg taaaggagct actttgggag tgtggtgaaa <210> 1432 <211> 419 | tgacgtgaaa cctaggtact ggtaaatttt tcattttaag taaatggaac tgggggtaag agctgcaggc tgggatgtcc taaagagaaa gccgaggcgg ccccgtctct | gaagaatctc gcaggcagtt attgatggct tctttagacc agaaacttcc agtcccactt agtggggact taggggctga gcagtggccg gtggatcacg | attacatctt tatttcccca ctcattacat accatcagtc tcactctgaa tctaaattgg tggggactag tgaaagtgag ggcgcagtgg aggtcaggag | ggatccaaag agcattgtac ttagttgtgg ataatttca ttttggataa tgatttctgt aacaggcagg ccttgacagc ctcacgcctg atcgagacta | caagcactga attttgcttg ggtgatgtca aagaagctaa gtttgtcatt cacatgtcta gaggtggaga agctttgttc taatcccagc | 120 180 240 300 360 420 480 540 600 660 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc ttttgtctat tagcccatgg aggtagaacc gctattctgg taaaggagct actttgggag tgtggtgaaa <210> 1432 <211> 419 <212> DNA <213> Homo <400> 1432 | tgacgtgaaa cctaggtact ggtaaatttt tcattttaag taaatggaac tgggggtaag agctgcaggc tgggatgtcc taaagagaaa gccgaggcgg ccccgtctct | gaagaatctc gcaggcagtt attgatggct tctttagacc agaaacttcc agtcccactt agtggggact taggggctga gcagtggccg gtggatcacg actaaaaata | attacatctt tatttcccca ctcattacat accatcagtc tcactctgaa tctaaattgg tggggactag tgaaagtgag ggcgcagtgg aggtcaggag caaaaaaaaa | ggatccaaag agcattgtac ttagttgtgg ataattttca ttttggataa tgatttctgt aacaggcagg ccttgacagc ctcacgcctg atcgagacta aaaaaa | caagcactga attttgcttg ggtgatgtca aagaagctaa gtttgtcatt cacatgtcta gaggtggaga agctttgttc taatcccagc tcctggctaa | 120 180 240 300 360 420 480 540 600 660 706 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc ttttgtctat tagcccatgg aggtagaacc gctattctgg taaaggagct actttgggag tgtggtgaaa <210> 1432 <211> 419 <212> DNA <213> Homo <400> 1432 ccacgcgtcc | tgacgtgaaa cctaggtact ggtaaatttt tcatttaag taaatggaac tgggggtaag agctgcaggc tgggatgtcc taaagagaaa gccgaggcgg ccccgtctct sapiens ggaagaggag | gaagaatctc gcaggcagtt attgatggct tctttagacc agaaacttcc agtcccactt agtggggact taggggctga gcagtggccg gtggatcacg actaaaaata | attacatctt tatttcccca ctcattacat accatcagtc tcactctgaa tctaaattgg tggggactag tgaaagtgag ggcgcagtgg aggtcaggag caaaaaaaaa | ggatccaaag agcattgtac ttagttgtgg ataattttca ttttggataa tgatttctgt aacaggcagg ccttgacagc ctcacgcctg atcgagacta aaaaaa | caagcactga attttgcttg ggtgatgtca aagaagctaa gtttgtcatt cacatgtcta gaggtggaga agctttgttc taatcccagc tcctggctaa | 120 180 240 300 360 420 480 540 600 660 706 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc ttttgtctat tagcccatgg aggtagaacc gctattctgg taaaggagct actttgggag tgtggtgaaa <210> 1432 <211> 419 <212> DNA <213> Homo <400> 1432 ccacgcgtcc gcagcttttc | tgacgtgaaa cctaggtact ggtaaatttt tcattttaag taaatggaac tgggggtaag agctgcaggc tgggatgtcc taaagagaaa gccgaggcgg ccccgtctct sapiens ggaagaggag ttcattgtgt | gaagaatctc gcaggcagtt attgatggct tctttagacc agaaacttcc agtcccactt agtggggact taggggctga gcagtggccg gtggatcacg actaaaaata | attacatctt tatttcccca ctcattacat accatcagtc tcactctgaa tctaaattgg tggggactag tgaaagtgag ggcgcagtgg aggtcaggag caaaaaaaaa | ggatccaaag agcattgtac ttagttgtgg ataattttca ttttggataa tgatttctgt aacaggcagg ccttgacagc ctcacgcctg atcgagacta aaaaaa | caagcactga attttgcttg ggtgatgtca aagaagctaa gtttgtcatt cacatgtcta gaggtggaga agctttgttc taatcccagc tcctggctaa taattgacag cactattcta | 120 180 240 300 360 420 480 540 600 706 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc ttttgtctat tagcccatgg aggtagaacc gctattctgg taaaggagct actttgggag tgtggtgaaa <210> 1432 <211> 419 <212> DNA <213> Homo <400> 1432 ccacgcgtcc gcagcttttc tagtatgttg | tgacgtgaaa cctaggtact ggtaaatttt tcattttaag taaatggaac tgggggtaag agctgcaggc tgggatgtcc taaagagaaa gccgaggcgg ccccgtctct sapiens ggaagaggag ttcattgtgt aaacttttaa | gaagaatctc gcaggcagtt attgatggct tctttagacc agaaacttcc agtcccactt agtggggact taggggctga gcagtggccg gtggatcacg actaaaaata gtttgtgttg gctttttgct atggaaacgg | attacatctt tatttcccca ctcattacat accatcagtc tcactctgaa tctaaattgg tggggactag tgaaagtgag ggcgcagtgg aggtcaggag caaaaaaaaa ccttcagatg ttgctcaca cttttcatta | ggatccaaag agcattgtac ttagttgtgg ataattttca ttttggataa tgatttctgt aacaggcagg ccttgacagc ctcacgcctg atcgagacta aaaaaa actgttgatt acaaggcag | caagcactga attttgcttg ggtgatgtca aagaagctaa gtttgtcatt cacatgtcta gaggtggaga agctttgtc taatcccagc tcctggctaa taattgacag cactattcta catttcttc | 120 180 240 300 360 420 480 540 600 706 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc ttttgtctat tagcccatgg aggtagaacc gctattctgg taaaggagct actttgggag tgtggtgaaa <210> 1432 <211> 419 <212> DNA <213> Homo <400> 1432 ccacgcgtcc gcagcttttc tagtatgttg ccccttcca | tgacgtgaaa cctaggtact ggtaaatttt tcattttaag taaatggaac tgggggtaag agctgcaggc tgggatgtcc taaagagaaa gccgaggcgg ccccgtctct sapiens ggaagaggag ttcattgtgt aaactttaa tgccttagct | gaagaatctc gcaggcagtt attgatggct tctttagacc agaaacttcc agtcccactt agtggggact taggggctga gcagtggccg gtggatcacg actaaaaata gtttgtgttg gctttttgct atggaaacgg ttctccgcta | attacatctt tatttcccca ctcattacat accatcagtc tcactctgaa tctaaattgg tggggactag tgaaagtgag ggcgcagtgg aggtcaggag caaaaaaaaa ccttcagatg tttgctcaca cttttcatta agtcttggct | ggatccaaag agcattgtac ttagttgtgg ataattttca ttttggataa tgatttctgt aacaggcagg ccttgacagc ctcacgcctg atcgagacta aaaaaa actgttgatt acaaggcag tcttcagcag | caagcactga attttgcttg ggtgatgtca aagaagctaa gtttgtcatt cacatgtcta gaggtggaga agctttgttc taatcccagc tcctggctaa taattgacag cactattcta catttctc ctgtacctcc | 120 180 240 300 360 420 480 540 600 706 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc ttttgtctat tagcccatgg aggtagaacc gctattctgg taaaggagct actttgggag tgtggtgaaa <210> 1432 <211> 419 <212> DNA <213> Homo <400> 1432 ccacgcgtcc gcagcttttc tagtatgttg ccccttcca accagaaatg | tgacgtgaaa cctaggtact ggtaaatttt tcattttaag taaatggaac tgggggtaag agctgcaggc tgggatgtcc taaagagaaa gccgaggcgg ccccgtctct sapiens ggaagaggag ttcattgtgt aaactttaa tgccttagct acaaaaggtg | gaagaatctc gcaggcagtt attgatggct tctttagacc agaaacttcc agtcccactt agtggggctga gcagtggccg gtggatcacg actaaaaata gtttgtgttg gctttttgct atggaaacgg ttctccgcta caattgtgct | attacatctt tatttcccca ctcattacat accatcagtc tcactctgaa tctaaattgg tggggactag tgaaagtgag ggcgcagtgg aggtcaggag caaaaaaaaa ccttcagatg ttgctcaca ctttcatta agtcttggct aggagatggc | ggatccaaag agcattgtac ttagttgtgg ataattttca ttttggataa tgatttctgt aacaggcagg ccttgacagc ctcacgcctg atcgagacta aaaaaa actgttgatt acaaggcagt tctcagcag gatgaagata | caagcactga attttgcttg ggtgatgtca aagaagctaa gtttgtcatt cacatgtcta gaggtggaga agctttgttc taatcccagc tcctggctaa taattgacag cactattcta catttcttc ctgtacctcc tgccagtgga | 120 180 240 300 360 420 480 540 600 706 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc ttttgtctat tagcccatgg aggtagaacc gctattctgggt taaaggagct actttgggag tgtggtgaaa <210> 1432 <211> 419 <212> DNA <213> Homo <400> 1432 ccacgcgtcc gcagcttttc tagtatgttg ccccttcca accagaaatg gttttgtgtg | tgacgtgaaa cctaggtact ggtaaatttt tcattttaag taaatggaac tgggggtaag agctgcaggc tgaggcgg cccgaggcgg ccccgtctct sapiens ggaagaggag ttcattgtgt aaacttttaa tgccttagct acaaaaggtg tgggctgctg | gaagaatctc gcaggcagtt attgatggct tctttagacc agaaacttcc agtcccactt agtggggact taggggctga gcagtggccg gtggatcacg actaaaaata gttgtgttg gctttttgct atggaaacgg ttctccgcta caattgtgct gggactgttt | attacatctt tatttcccca ctcattacat accatcagtc tcactctgaa tctaaattgg tgggactag tgaaagtgag ggcgcagtgg aggtcaggag caaaaaaaaa ccttcagatg tttgctcaca cttttcatta agtcttggct aggagatggc tccttctgtg | ggatccaaag agcattgtac ttagttgtgg ataattttca ttttggataa tgatttctgt aacaggcagg ccttgacagc ctcacgcctg atcgagacta aaaaaa actgttgatt acaagtgcatt acaaaggaag tcttcagcag gatgaagata tttggttttg | caagcactga attttgcttg ggtgatgtca aagaagctaa gtttgtcatt cacatgtcta gaggtggaga agctttgttc taatcccagc tcctggctaa taattgacag cactattcta catttcttc ctgcagtgga tttatttt | 120 180 240 300 360 420 480 540 600 706 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc ttttgtctat tagcccatgg aggtagaacc gctattctgggt taaaggagct actttgggag tgtggtgaaa <210> 1432 <211> 419 <212> DNA <213> Homo <400> 1432 ccacgcgtcc gcagcttttc tagtatgttg ccccttcca accagaaatg gttttgtgtg | tgacgtgaaa cctaggtact ggtaaatttt tcattttaag taaatggaac tgggggtaag agctgcaggc tgggatgtcc taaagagaaa gccgaggcgg ccccgtctct sapiens ggaagaggag ttcattgtgt aaactttaa tgccttagct acaaaaggtg | gaagaatctc gcaggcagtt attgatggct tctttagacc agaaacttcc agtcccactt agtggggact taggggctga gcagtggccg gtggatcacg actaaaaata gttgtgttg gctttttgct atggaaacgg ttctccgcta caattgtgct gggactgttt | attacatctt tatttcccca ctcattacat accatcagtc tcactctgaa tctaaattgg tgggactag tgaaagtgag ggcgcagtgg aggtcaggag caaaaaaaaa ccttcagatg tttgctcaca cttttcatta agtcttggct aggagatggc tccttctgtg | ggatccaaag agcattgtac ttagttgtgg ataattttca ttttggataa tgatttctgt aacaggcagg ccttgacagc ctcacgcctg atcgagacta aaaaaa actgttgatt acaagtgcatt acaaaggaag tcttcagcag gatgaagata tttggttttg | caagcactga attttgcttg ggtgatgtca aagaagctaa gtttgtcatt cacatgtcta gaggtggaga agctttgttc taatcccagc tcctggctaa taattgacag cactattcta catttcttc ctgcagtgga tttatttt | 120 180 240 300 360 420 480 540 600 706 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc ttttgtctat tagcccatgg aggtagaacc gctattctgggt taaaggagct actttgggag tgtggtgaaa <210> 1432 <211> 419 <212> DNA <213> Homo <400> 1432 ccacgcgtcc gcagcttttc tagtatgttg ccccttcca accagaaatg gttttgtgtg | tgacgtgaaa cctaggtact ggtaaatttt tcattttaag taaatggaac tgggggtaag agctgcaggc tgaggcgg cccgaggcgg ccccgtctct sapiens ggaagaggag ttcattgtgt aaacttttaa tgccttagct acaaaaggtg tgggctgctg | gaagaatctc gcaggcagtt attgatggct tctttagacc agaaacttcc agtcccactt agtggggact taggggctga gcagtggccg gtggatcacg actaaaaata gttgtgttg gctttttgct atggaaacgg ttctccgcta caattgtgct gggactgttt | attacatctt tatttcccca ctcattacat accatcagtc tcactctgaa tctaaattgg tgggactag tgaaagtgag ggcgcagtgg aggtcaggag caaaaaaaaa ccttcagatg tttgctcaca cttttcatta agtcttggct aggagatggc tccttctgtg | ggatccaaag agcattgtac ttagttgtgg ataattttca ttttggataa tgatttctgt aacaggcagg ccttgacagc ctcacgcctg atcgagacta aaaaaa actgttgatt acaagtgcatt acaaaggaag tcttcagcag gatgaagata tttggttttg | caagcactga attttgcttg ggtgatgtca aagaagctaa gtttgtcatt cacatgtcta gaggtggaga agctttgttc taatcccagc tcctggctaa taattgacag cactattcta catttcttc ctgcagtgga tttatttt | 120 180 240 300 360 420 480 540 600 706 |
| gcccacgcgt cggcaattgt tgaagctcac acttcatatg ccttcgtagc ttttgtctat tagcccatgg aggtagaacc gctattctggag tgaaggtgaaa <210> 1432 <211> 419 <212> DNA <213> Homo <400> 1432 ccacgcgtcc gcagcttttc tagtatgttg ccccttcca accagaaatg gttttgtgtg gttattccag | tgacgtgaaa cctaggtact ggtaaatttt tcattttaag taaatggaac tgggggtaag agctgcaggc tgggatgtcc taaagagaaa gccgaggcgg ccccgtctct sapiens ggaagaggag ttcattgtgt aaactttaa tgccttagct acaaaaggtg tgggctgctg aaagttgaga | gaagaatctc gcaggcagtt attgatggct tctttagacc agaaacttcc agtcccactt agtggggact taggggctga gcagtggccg gtggatcacg actaaaaata gttgtgttg gctttttgct atggaaacgg ttctccgcta caattgtgct gggactgttt | attacatctt tatttcccca ctcattacat accatcagtc tcactctgaa tctaaattgg tgggactag tgaaagtgag ggcgcagtgg aggtcaggag caaaaaaaaa ccttcagatg tttgctcaca cttttcatta agtcttggct aggagatggc tccttctgtg | ggatccaaag agcattgtac ttagttgtgg ataattttca ttttggataa tgatttctgt aacaggcagg ccttgacagc ctcacgcctg atcgagacta aaaaaa actgttgatt acaagtgcatt acaaaggaag tcttcagcag gatgaagata tttggttttg | caagcactga attttgcttg ggtgatgtca aagaagctaa gtttgtcatt cacatgtcta gaggtggaga agctttgttc taatcccagc tcctggctaa taattgacag cactattcta catttcttc ctgcagtgga tttatttt | 120 180 240 300 360 420 480 540 600 706 |

```
<212> DNA
<213> Homo sapiens
<400> 1433
gccaagcttc aaacatagat ctcctgactc cattcatatg accctataaa ctgtctcaaa
                                                                       60
acaaaaagat aaattaatat aaatatttat tgaatatgtc tttgtagaga aagcataata
                                                                       120
agcataaagg gcaatgcgtt aacctttatc acaagcaacc ctattggaat gtgtcaactt
                                                                       180
atcagaatga atcaggccag aatatcaagt ataaatgaag cctgtagtta actgaaagtt
                                                                       240
gcatatcaat caggcactcc agtttctctc ctcaaactct gaatattcaa tgaataagat
                                                                       300
aaagaaatgg ctaatttgat tttacctttc atttttttga cctaattcta aggtgactac
                                                                       360
tcactcctca agatttaact aatgttgctt tatttttatc cctctgggga gacagaagag
                                                                       420
                                                                       480
atgattggga aacacatgtt tgaagtttgt aagttctgct gctttcaacc ccacagatgt
                                                                       540
ctcttactgc ccacttggss cctkgtgatt aagcaactag atttggagcc agtcaggctt
ttgtttagac attttaactt tttcttgctt tccttgcaaa ctcctcagcc ttcagactgg
                                                                       600
ttggaaagta aatgtacaat cttacataaa ttttcaggta atagcatttc agctttttcc
                                                                       660
                                                                       720
ccargatttt ttgcttggga ggagacagat tagactggat tcggagtctt gattttgcaa
                                                                       780
aggtaacaaa agacatgttt ttttataaga cttttcatca taagtttatt ttattcaaca
                                                                       840
gaagcaaaat ctaatataat ggaaaaaata aagatctgtg ataaatctga tctgtgtkga
                                                                       900
taaacacaat tagaaagatt taaagattaa gtattgaaac aaactaccaa aatattttaa
                                                                       960
tactgatttg taaaaatttc agtacatttt tcttctttgc ttaattctac tgggtcctgt
                                                                      1020
ttttcatcaa aacattctat catgttagta tacaatagcc aaaaaaaaa aaaaagggcg
                                                                      1025
gccgc
<210> 1434
<211> 1390
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1301)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1308)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1327)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1347)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1355)
<223> n equals a,t,g, or c
<400> 1434
                                                                        60
gttgaggtga gtcagtttct gatgcagttg ggctccaccg catgctaggt tccagcccac
ttatgctcat ttgggctacc acatttgtaa gatctagcat tgcttgctct ctgtctgctc
                                                                       120
ttttttcccc aaggaatacc tttctgtaac tctcatctct ccaaagtcct ggaaatctac
                                                                       180
ctcgatgaag gatgaagaga aagaagacgg gaatcacatc aggcatttag aacatagccc
                                                                       240
ataattaacc actcattttg cccttctggc atgctgcact cacccaattt gtcacaaaga
                                                                       300
gagcagtacg ggttggtgat ggcactggtg atttaaatga aaaatggctc tttcttactt
                                                                       360
                                                                       420
attctaagaa gccaagttga ttttttttta tatatgttac cttccagacc ctgcagatgg
```

```
480
agaaggccca gagacattaa gctcagcact ctctaaagga gcaacagttt acagcccttc
                                                                     540
cagatacagc taccaggtga gatgagaaat tgctggtctc tagccatagg agtgtgttct
                                                                     600
gggtcccaaa ttgtcctggt catcctttgc cattgagatg ctgtctttgc atatagtttc
agcagccttg graaataagt catcatctgc ttgtcctcag gtaataaatt atgccagaag
                                                                     660
atgaatacgg tgatcaaaga cagacatttt actgcctttg gtttccyaaa argawtacat
                                                                     720
ggttaaaaga tgaagaaaaa agaatgtagg gtattataaa tgttcaccag ccatttaagg
                                                                     780
gacttgttcg cgtccttatt cgtttcctcc caactttgtc tagctcctgc agtgtgatag
                                                                     840
                                                                     900
tcctcggaca gaatcacaaa gcctccttca gcagagttcc tcccccttca gaggacatcc
tacacagtet ccaggataca gttategaae taetgeaetg agaeetggaa acceeecte
                                                                     960
tcacggttct tcagaatcat ccctctcttc cacgtcctat tccagccccg cccaccctgt
                                                                    1020
gtccacagac tcgttggccc catttacggg gacaccaggg tattttagca gccagccaca
                                                                    1080
ttctggaaac agcactggca gcaatcttcc aaggaggagc tgcccttcta gtgstgctag
                                                                    1140
ccctamcctg cagggaccct cagactcgcc aacctcagat tcagtttctc agtccagcac
                                                                    1200
aggaactctg agttccacct cctttctcag aactctaggt cgtcattggc atcagactta
                                                                    1260
                                                                    1320
cggactatca gtctgccagt gctgggcagt agctgttaca ngcctcangg tatctgcggt
tccaatnaca gactaccaca cgtggantgg gtggnacata ccgattcagc atgaaggtag
                                                                    1380
                                                                    1390
agtagactaa
<210> 1435
<211> 783
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (14)
<223> n equals a,t,g, or c
<400> 1435
                                                                      60
gactcactat aggnaaactg gtacgctgca ggtaccggtc cggaattccc gggtcgaacc
accgtccgcg gacgcgtggg ttttaagttg tcgtcttgcc tctgtgctct tgaagttttg
                                                                     120
                                                                     180
agccctttgc atttggcagt gtccaggcat tcaggcctgg agcccgtgta gtgccagtgc
                                                                     240
ctccctccac gctcttggcc tggttgacct cacctaaacc ctccaaaaag cagatggtca
                                                                     300
gactetette cetteaaact ettetetgee etgacteaca eetgggeeat tteatecagt
                                                                     360
gagactgagg gaggagcgag ggagtccatg tttcccctcc atgacgccgg gacaggaagc
                                                                     420
tagactcagt ctcttccata tggccaggaa ggggagtacc tgactgccca tcttggtttt
gggagagaga aaaaccagtg ctcagtctgg gaaatgaggt tttgggggat tgtgataaaa
                                                                     480
                                                                     540
tagaggacag gactctgcag gtcaaggaca gaggtgcatc ctgagggcgc actgcagtca
                                                                     600
gggccaagtg gctcactctt tgcagcttta gcagcacctt ggatatagtt gctgctccgt
aaacgtgttg attgacagag gtgcaggtaa aaacctcaga acagttgggc ttaaggatgc
                                                                     660
720
tggccaacac ggtgaaatcc catctctact aaaaatacaa aaaaaaaaa aaagggcggc
                                                                     780
                                                                     783
cgc
<210> 1436
<211> 909
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (909)
<223> n equals a,t,g, or c
<400> 1436
ggctggggtt tgccattttg tgtctttttt agtgttcttc caaattaaat tttcaagatc
                                                                      60
aaatatggga ctcattgtcc tgtttatgga gctttttttc ttttggttga ctattctttt
                                                                     120
                                                                     180
gtttcctaca gtcttcaaca actgttagtg cttacaatgg atacatcatg catcttaatt
gataggatgg atatgataat accttttttg gtccaaggtc ccgctcatta aaaaaaatag
                                                                     240
tttataaagc tgaaaagttt ttatttctat tttttgtaaa atgattttca tgataggatt
                                                                     300
ttatataaag gggaagggtt ttttgtatca tttttataac atttttgaaa tgagtactta
                                                                     360
```

<213> Homo sapiens

```
420
ttctctttca tcatctattt tagactcaca gttttatgag taatgcagta aaggtcatgt
                                                                  480
ttatgttaag tttgaagagc actggcctgg ggtatacttt gctgtgaaaa gatcattttg
                                                                  540
gtcacttaaa ttacaataga aatatttgtg ttaagaaaat taagtaaaaa ttaggctggg
                                                                  600
cacagtggct cgcacctgta attccaggac tttgggaggc ctaggcaggt ggatcacctg
                                                                  660
aggtcaggag ttcgagaccg gcccgaccaa cacggtgaaa ccctgtctgt actaaaaata
                                                                  720
caaaaattat ccaggcgtag tggcaggagc ctgtaatccc agctccttgg gaggctgagg
                                                                  780
caggagaatc gcttgaaccc gggaggcgga ggttgcagtg agccgagact gtgccactgt
                                                                  840
900
                                                                  909
ggcggccgn
<210> 1437
<211> 766
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (758)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (759)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (760)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (761)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (762)
<223> n equals a,t,g, or c
<400> 1437
ccacgcgtcc ggtctcagca acaagagcaa aactccatct caaaaaaaaa agaaaaaaga
                                                                   60
tggcttgccc tggcattggc gtttgtcctt cttgtacaca caaaagcatc atgctttgta
                                                                  120
cactgttcgt ttttgtttcg ttcactgtct tcacggtaaa gatgaactaa gagccactga
                                                                  180
gaaggctgtt tatgggaacc agaaggttgt ttgcttccct taagttcgct cttcctggca
                                                                  240
cctggtgccc ttgcagccca tggggaatgt gatggtcacg ttttctcgtc tctcctgcct
                                                                  300
catcccatca gccagttcac tgctgtgcct gaactcctgt acagggtgtc tggtgcatgt
                                                                  360
ccacataaca aaaagatggt actgatcatt gagtttatct ccaaaaattt ttttcaattt
                                                                  420
gattgtagaa aatacatttt taggcggggc atgatggctc atacctgtaa tcccggcatt
                                                                  480
tggggggccg aggcgggcgg atcacctgag gtcaggagtt ccttacagcc tggccggcgt
                                                                  540
                                                                  600
ggtgaagccc cgtctctgct aaagatacag agactagcca agcgtggtgg catacgcctg
taattccagc tactcgggag gctgaggcag gagaatcgct tgggcctggg aggcggaggt
                                                                  660
tgcagtgagc agagattgca tcattgcact gcagcctggg cgataagagt gaaactccgt
                                                                  720
ctctaaaaaa aaaaaaaaa aaaaaaaaaaa aaaaaaannn nnaaaa
                                                                  766
<210> 1438
<211> 712
<212> DNA
```

| <400> 1438 ccacgcgtcc | aaacctccac | cacaagaaat | taactccaaa | cctattccca | ttacatcatc | 60 |
|------------------------|------------|------------|-------------|--------------|-------------|------|
| acccactaat | gggccccac | cacaagaaac | tataatttaa | aacttatatt | attattttcc | 120 |
| ttccatttct | gicaliacae | cayaacyaaa | agaaggaaaa | ggcccgcace | aaaaaaaaaa | 180 |
| aaaatcagag | ccccccac | atttaagat | gaaygaaaa | trcccarag | ctasacctag | 240 |
| aaaatcagag | acctgtaaac | atttaagagt | gaartygata | ctaccacage | totatocaca | 300 |
| agttgtcagc | tttcattcca | ttetgetgtg | atagagtgtt | gatttggtgg | tttactttca | 360 |
| tggagcctgg | aaagtaacaa | gtctggtcat | gtgacaactg | getttggtge | agtasataga | 420 |
| gcccctcaga | attagttcct | aatggctcac | atageteect | geeageatee | egteactyge | 480 |
| acgttaaacc | ttttcaaata | attcctcaga | atagagattc | ttaggagage | actadatttc | 540 |
| tccattcttt | gtgtttaatt | aaactgttct | tgcattttaa | tatttgccag | ataagegett | 600 |
| aagacattac | gatacaggtt | gagtatcctt | aatctgaaaa | tctgaaatcc | gaaacttttt | 660 |
| gaccctgaca | tgacgctcaa | aggaaatgct | cattttcgat | tttggatttc | agatttggga | |
| tgctcaacca | gtaagtataa | tggcaaactt | attccaaaaa | aaaaaaaaa | aa | 712 |
| <210> 1439 | | | | | | |
| <211> 680 | | | | | | |
| <211> 000 <212> DNA | | | | | | |
| <213> Homo | saniens | | | | | |
| \Z13> 1101110 | Saprens | | | | | |
| <400> 1439 | | | | | | 60 |
| cctactttgc | cagtacgatc | tgttcctctc | tctctctcgc | tccaaaagac | taatctgcac | 60 |
| actctgttac | agcacttgtc | taattgtgct | gtagcgttta | tttacatgtt | tgtttctcct | 120 |
| ctagccagtg | agcacctctc | aagcagaatt | atcttccttg | tttctctggc | accctaaata | 180 |
| tttgttgaat | taatagtcct | tctcttcttt | tgtaattttg | ctttctgtaa | tagaagctta | 240 |
| attttaagta | tagttatatc | agtaatcaaa | atgaatcaca | cactgagaaa | tcaatgtgga | 300 |
| tgccctttaa | gggttctgtt | attttttta | ttgccattga | gtaaaataag | atactctgtg | 360 |
| ataaagtata | ttagcattaa | agtgttcaaa | tctgatcttt | attagtaggc | ctcaagtgaa | 420 |
| tccttgctga | catttaaggt | ttatgacatt | tccttcacgt | tcgttcttga | ctggaaggca | 480 |
| taaatggctg | acagtaaaga | gcaattaata | attttccaag | taaaacattt | tcagggacat | 540 |
| ctgcctttat | tgctccccag | atgagagtac | agcctgtttc | ttatgtgttc | caaagatgat | 600 |
| ttccctatca | gctttttggt | cagttaacca | aaaaaaaaaa | aaaaaaaaaa | agaaaagaaa | 660 |
| aaaaaaaaaa | aagggcggcc | | | | | 680 |
| <210> 1440 | | | | | | |
| <211> 1004 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | L | | | | | |
| <400> 1440 | | | | tatatagaga | ttattcatca | 60 |
| ccacgcgtcc | gcccacgcgt | ccgcagtgtt | gtacagcaga | anatatana | ttattcatca | 120 |
| gttaaggaag | ataagctcag | gaaaatgtat | cuttaatgtg | aaatgtcaaa | aggacctagg | 180 |
| aaagaaagtc | atgtttttt | ettgetgtte | agtaatttagt | tcattaccaa | actactgccat | 240 |
| caatgcataa | catataaaca | tttcataatt | cattttcatt | tctagaggaa | ttagettage | 300 |
| aaaaacaata | tetteaggta | gcagtgaaag | gaagcagaga | totacggccgc | ttggatttga | 360 |
| gtgaattett | tcaacacaaa | tcaatgattt | tacagacaca | tataggtttt | actcatctat | 420 |
| ccttagcttt | tgcatctcaa | aatctattt | ctctagggaa | tccaatctga | gctcatctgt | 480 |
| cttaccctcc | ttgtctcaga | geeeaggett | agtttt | gggggagttt | aaagcccccc | 540 |
| ccttgtctct | gtccttttga | geeteatgta | actiticada | ggcccacccc | aaattccacc | 600 |
| actctataaa | aagcttctcc | aactattcta | tattagagta | getetaget | tcctccataa | 660 |
| tactttggac | cttttagctg | accordacto | artatatat | caytytaaay | gttctgtatt | 720 |
| tatgggctgc | atactggcat | gatgettete | agitalgiat | gararcaray | tegettttte | 780 |
| aggacaaaac | tgtgtcacag | igitacagca | addictataa | attactttat | gcatgtaaat | 840 |
| tcagctcagt | gaatgcttat | taaacattaa | cgtaatcctt | tatttagaaa | ttattcaacc | 900 |
| ctacagtgaa | attttctggg | cgcttggagt | aattatatta | . cacceycaya | tatttaattt | 960 |
| caactttac | acattaaaca | agtagaaaac | catgictica | . aaaacatatt | ctttaaaagt | 1004 |
| gattgtttag | ggcaaaaaaa | aaaaaaaaaa | aaaaddaadd | aaaa | | 1004 |
| <210> 1441 | | | | | | |
| <211> 1305 | | | | | | |
| | | | | | | |

<212> DNA <213> Homo sapiens

```
<220>
<221> SITE
<222> (329)
<223> n equals a,t,g, or c
<400> 1441
gcggaacgst ggtgtgggtt tttaaaaaac aaaacaagat acatgctgac atttctggtt
                                                                       60
                                                                      120
tggcaggcag agettgttct gctccccacc ctcccttttc ccatagtaac catttatagg
acatctcact gttgtctact ctgtgttgcc tctgcttccc tgcctggtag atctaggaat
                                                                      180
                                                                      240
cttaggattt cttagtttta gctggtgatc cgtatctttt tcttaattcc attgtaactt
                                                                      300
cagcttttct tattgcttgt aggaaggctg tttccattga atacaaacaa aataaaagct
                                                                      360
tttattctta atcttagaga taggatgtnt gtatttaaaa ataattgtgc tgtcaaaatt
                                                                      420
ctgtcaagtt ggcttttacc acattagttt tttttaatgt ggtttatatg accctgragt
accttgtctt ctcactgtta aattctcaac tgagttgtcc ctatttaaag tgtgagactg
                                                                      480
                                                                      540
tgccagtttg attttaaaat attgcaagtg cgttatggca agataaaact gcaaagaaag
                                                                      600
aaccttcatg tccctttgat tataaatgct tttggcactt gtttctactt tttcctaatg
                                                                      660
ttttttgagg aaagaacctc caactctcca gacaggtctg ggggcaaatg actaaaacat
                                                                      720
gaactgaggc cctgggctgt ctctgtgagg atatcccctc tattctctct gaaatgtccc
                                                                      780
agcatgtggt gcatttcttg ttagtgtgga ctcctctgta tataacacat cttatttatc
                                                                      840
ttctgtgcat aacatgaagt agtgccctaa tgcaattcca ggatgtaatt cagcatttct
                                                                      900
ataaaaatac agtgtttttc tacatttgca tcaaaaaata accagataat tatatttatt
                                                                      960
aagaaaatag catttttggc tgggtgtggt ggctcacgta atcccagcac tttgggaggc
                                                                     1020
cgaggcaggc agatcacttg aggtcaggag tgaggcaggc agatcacttg agatcaggag
ttcgagacca gyctggccaa catggtgaaa ccccatctct actaaaaatg caaaattagc
                                                                     1080
ctggcgtagt ggtgcatgcc tgtaatccta gctactcagg agactgaggc aggagaatca
                                                                     1140
cttgaacttg ggaaggggag attgcagtga gctgagattg tgccactgca ctccagccta
                                                                     1200
                                                                     1260
ggcaacagag tgagactctg tttcaaaaaa aaaaaaaaag ggcggccgct ctagaggatc
                                                                     1305
caagettace gtacgeegtg catgegacgt catagetett etata
<210> 1442
<211> 813
<212> DNA
<213> Homo sapiens
<400> 1442
gaagaaaacg tgaccgtaaa tatctgtagg atataggaac cagagagtag atggaacatg
                                                                       60
actagtaaga gacttaaatc caggggacct caggaggtaa tacaaaagaa ttttgtatta
                                                                      120
cggaattgtt tacctagaat ttgaactcgg gagagaatcc ctgtgtagga gtatatttct
                                                                      180
gcaaagaaag tgcttaaaga aatggttctt ccttcaatct gtttctttga tttgtatcag
                                                                      240
attagggaag gggaagctat ttgttggact tttcattttg gtaaaatctg aatgagtatt
                                                                      300
gagaatggct cttgagacag tagtgcactt tatattgctt tccttactgg tttttatgta
                                                                      360
tgatttatta ataggcaaaa atctcattat ggtgagctta atgacaaatc agtttgtttt
                                                                      420
                                                                      480
aaacacattt tattaaaata catttagttt aaaaagtaaa tttccaaact accagctgaa
tacaactgtc cagattcttg caaggaaaac caaatgctag agaaggccag gcgcgatggc
                                                                      540
tcactcctgt ggtcctagta ttttgggagg ccgaggcggg tggatcagtt tagctcagga
                                                                      600
gttcgagatc agcttaggca gcatggtggg accctgtctc tacagaaaat acaaaaatta
                                                                      660
gccggagggg aggcatgtgc ctgtagtccc agctactcgg gaggctacag cagggggatc
                                                                      720
                                                                      780
gcatgggcct gggaggcgga ggttgtagtt agccaagatg acaccattgc attccagcct
                                                                      813
gggtgacagg agtgaaatcc tgtctcaaaa aaa
<210> 1443
<211> 1694
<212> DNA
<213> Homo sapiens
<400> 1443
ccacgcgtcc gaagtaattt ggaaaatttt aacattccta gtgacttaag atttgattaa
                                                                        60
tagccttgtt ggtagtattt tatatattcc taaatactat tgtaaaatac tccctcaata
                                                                       120
aatcctgcat gcctttaaaa gtccctctca aaataatctg tttattcggc aggtaattgc
                                                                       180
                                                                       240
caatgtgttt tttggtggga atctttcatc ggttttccac attgttgtaa cagtgatggt
```

| catcactgta | gccacgcttg | tatcattact | gattgatgcc | tcgggatagt | tctagaactc | 300 |
|---|---|---|---|--|--|---|
| aatgtgagta | cgtgcaaaga | tttacccctt | cactctaaaa | ttctctttaa | aagataatga | 360 |
| ttacatttaa | cataagatgt | attttcctta | acaaaagtgt | cacttttgaa | gtgggaatca | 420 |
| agatatatt | gtaatagtaa | atatttcaat | gatgattctg | tacactttat | gggactatat | 480 |
| additatgeee | tagtggttgt | ttagagagat | atggggtcgt | cacaactggg | taggcagtgc | 540 |
| agttttaaag | tagtggataa | agagacat | atacatccca | caatgtgcag | gtctctcaca | 600 |
| tgttggeete | tagtggataa | ggccagggac | atacaccca | taacacacc | taatttaaaa | 660 |
| caaaaaatta | tctgatccaa | aatgicaatt | gigelgaggi | toagaaaccc | tataaattaa | 720 |
| tactttgcat | atctcattta | ctataacaca | taaatgttac | taaaaatagc | Lataaattaa | 780 |
| gtggatttgg | actttgctga | ataataatat | tctagtgaaa | tttatgagaa | atatgaaagg | |
| attcaagtta | tatccattca | cttgctatga | caaaatttct | ttttctttaa | atatttttt | 840 |
| ttctccagat | ctttcttta | tagtctgcac | tgccatcaac | caaatagaag | tcctcataat | 900 |
| atcacagttg | aattaatccc | agctctgttt | caactatcat | gtatttaagt | tctgctttca | 960 |
| gtttatcggc | attttcctac | cagagcaagt | ataaattccg | ttgcttctac | cttcttgtct | 1020 |
| tctqtqtaaa | actatttccc | atttacttcc | caaaatttat | gttcagctct | agtcaatcta | 1080 |
| attttttggc | ctgtgaataa | gccatatcaa | ttctttccat | tattctttgt | cctatctgct | 1140 |
| ttttatttcc | gataatgatt | atttttcttt | catttctgtc | caaattttac | aaaaacttta | 1200 |
| agatccagtg | caacttctaa | ttcctttatt | cacattcact | gatcatatat | ttattgagta | 1260 |
| attactatot | gccacacaat | agaatataag | gatgaatgca | ataagaaagg | acctgtgcat | 1320 |
| teteacaaat | aaacataaaa | attcaactac | aatataggtg | atgaagacag | aggaggccag | 1380 |
| cccacaaac | tcacgctgtg | atctcaccat | ttttggaggc | caaggtggat | ggattgcttg | 1440 |
| gaacggrage | ttggagacca | acctagacaa | cacaataaaa | ccccactct | acaaaaaatt | 1500 |
| ageceaggag | ggtggcatgt | gcctgggcaa | ccaactactt | gagaggtga | agtgagagga | 1560 |
| ageegggttt | ggtggcatgt | geetgegee | tanastasat | gagaggetga | actccacctc | 1620 |
| ttgcttgagc | ccgggaggta | gaggtttcag | tgagetagat | gcaccactgc | 222222222 | 1680 |
| | tgagacccgg | tctcaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaaa | 1694 |
| aaaaaaaaaa | aaaa | | | | | 1034 |
| | | | | | | |
| <210> 1444 | | | | | | |
| <211> 865 | | | | | | |
| <212> DNA | | | | | | |
| | | | | | | |
| <213> Homo | sapiens | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1444 | _ | | | | | |
| <400> 1444 ggcacgaggt | gaggtgtgcc | ttttaccttc | tgccatgatt | gtgaagcctc | cccaccacat | 60 |
| <400> 1444 ggcacgaggt qqaacggtga | gaggtgtgcc cagattgact | gggatcccct | cgcacatcct | caacagctcc | ccatcagacc | 120 |
| <400> 1444 ggcacgaggt qqaacggtga | gaggtgtgcc cagattgact | gggatcccct | cgcacatcct | caacagctcc | ccatcagacc | 120 180 |
| <400> 1444 ggcacgaggt ggaacggtga ggcagattaa | gaggtgtgcc cagattgact ccagctggcc | gggatcccct cagaggctgg | cgcacatcct gccctgagtg | caacagctcc ggagcccatg | ccatcagacc gtgctgtctc | 120 |
| <400> 1444 ggcacgaggt ggaacggtga ggcagattaa tgggactgtc | gaggtgtgcc cagattgact ccagctggcc ccagacggat | gggatcccct cagaggctgg atctaccgct | cgcacatcct gccctgagtg gtaaggccaa | caacagctcc ggagcccatg ccacccccac | ccatcagacc gtgctgtctc aacgtgcagt | 120 180 |
| <400> 1444 ggcacgaggt ggaacggtga ggcagattaa tgggactgtc | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggccttc | gggatcccct cagaggctgg atctaccgct atccgttggc | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt | caacagetee ggageceatg ecaceceae egggaageag | ccatcagacc gtgctgtctc aacgtgcagt gccaccttcc | 120 180 240 |
| <400> 1444 ggcacgaggt ggaacggtga ggcagattaa tgggactgtc cgcaggtggt agagcctgca | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggccttc caacgggctg | gggatcccct cagaggctgg atctaccgct atccgttggc cgggctgtgg | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc | caacagetee ggageceatg ccaececeae egggaageag etegetgete | ccatcagacc gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt | 120 180 240 300 |
| <400> 1444 ggcacgaggt ggaacggtga ggcagattaa tgggactgtc cgcaggtggt agagcctgca | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggccttc caacgggctg gtgcctccag | gggatcccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc | caacagetee ggageceatg ccaceceae egggaageag etegetgete ectgagteat | ccatcagacc gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa | 120 180 240 300 360 |
| <400> 1444 ggcacgaggt ggaacggtga ggcagattaa tgggactgtc cgcaggtggt agagcctgca tggagtgatg | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggccttc caacgggctg gtgcctccag cactcagagc | gggatcccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg aggtggtttt | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc ttgtgtaggt | caacagetee ggageceatg ccaceceae egggaageag etegetgete ectgagteat ttgttttta | ccatcagacc gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa tttttgatga | 120 180 240 300 360 420 480 |
| <400> 1444 ggcacgaggt ggaacggtga ggcagattaa tgggactgtc cgcaggtggt agagcctgca tggagtgatg tcctgacttt tcttcagatg | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggccttc caacgggctg gtgcctccag cactcagagc gaaggagaaa | gggatcccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg aggtggtttt acagggtttc | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc ttgtgtaggt cactagacat | caacagetee ggageceatg ccaceceae egggaageag etegetgete ectgagteat ttgttttta tacttgaaag | ccatcagacc gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa tttttgatga gccagattac | 120 180 240 300 360 420 480 540 |
| <400> 1444 ggcacgaggt ggaacggtga ggcagattaa tgggactgtc cgcaggtggt agagcctgca tggagtgatg tcctgacttt tcttcagatg | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggccttc caacgggctg gtgcctccag cactcagagc gaaggagaaa tcccatgttg | gggatcccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg aggtggtttt acagggtttc gctcaacaat | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc ttgtgtaggt cactagacat tctttgtttt | caacagetee ggageceatg ccaceceae egggaageag etegetgete ectgagteat ttgttttta tacttgaaag taattgettg | ccatcagacc gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa tttttgatga gccagattac aagattgcat | 120 180 240 300 360 420 480 540 |
| <400> 1444 ggcacgaggt ggaacggtga ggcagattaa tgggactgtc cgcaggtggt agagcctgca tggagtgatg tcctgacttt tcttcagatg tcagcagatc | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggccttc caacgggctg gtgcctccag cactcagagc gaaggagaaa tcccatgttg | gggatcccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg aggtggtttt acagggtttc gctcaacaat taaatgtgta | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc ttgtgtaggt cactagacat tctttgttt atggcatttt | caacagctcc ggagcccatg ccaccccac cgggaagcag ctcgctgctc cctgagtcat ttgttttta tacttgaaag taattgcttg aatagactag | ccatcagacc gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa tttttgatga gccagattac aagattgcat taaatcacag | 120 180 240 300 360 420 480 540 600 660 |
| <400> 1444 ggcacgaggt ggaacggtga ggcagattaa tgggactgtc cgcaggtggt agagcctgca tggagtgatg tcctgacttt tcttcagatg tcagcagatc | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggccttc caacgggctg gtgcctccag cactcagagc gaaggagaaa tcccatgttg gttcagtttt | gggatcccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg aggtggtttt acagggtttc gctcaacaat taaatgtgta tatatatat | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc ttgtgtaggt cactagacat tctttgttt atggcatttt | caacagetee ggageceatg ccaceceae egggaageag etegetgete ectgagteat ttgttttta tacttgaaag taattgettg aatagactag | ccatcagacc gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa tttttgatga gccagattac aagattgcat taaatcacag gtcatcacat | 120 180 240 300 360 420 480 540 600 660 720 |
| <400> 1444 ggcacgaggt ggaacggtga ggcagattaa tgggactgtc cgcaggtggt agagcctgca tggagtgatg tcctgacttt tcttcagatg tcagcagatc tgttgtaatt tggttcaaaa tacaggcagg | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggccttc caacgggctg gtgcctccag cactcagagc gaaggagaaa tcccatgttg gttcagtttt tatatatcca | gggatcccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg aggtggtttt acagggtttc gctcaacaat taaatgtgta tatatatata gttaaacatt | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc ttgtgtaggt cactagacat tctttgttt atggcatttt tatccatata tacctgaatg | caacagctcc ggagcccatg ccaccccac cgggaagcag ctcgctgctc cctgagtcat ttgttttta tacttgaaag taattgcttg aatagactag tatatctcat | ccatcagacc gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa tttttgatga gccagattac aagattgcat taaatcacag gtcatcacat actgaactgt | 120 180 240 300 360 420 480 540 600 660 720 780 |
| <400> 1444 ggcacgaggt ggaacggtga ggcagactgtc cgcaggtggt agagcctgca tggagtgatg tcctgacttt tcttcagatg tcagcagatc tgttgtaatt tggttcaaaa tacaggcagg | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggccttc caacgggctg gtgcctccag cactcagagc gaaggagaaa tcccatgttg gttcagtttt tatatatcca tgtctcatat | gggatccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg aggtggttt acagggtttc gctcaacaat taaatgtgta tatatatat gttaaacatt ataaataat | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc ttgtgtaggt cactagacat tctttgttt atggcatttt tatccatata tacctgaatg | caacagctcc ggagcccatg ccaccccac cgggaagcag ctcgctgctc cctgagtcat ttgttttta tacttgaaag taattgcttg aatagactag tatatctcat | ccatcagacc gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa tttttgatga gccagattac aagattgcat taaatcacag gtcatcacat actgaactgt | 120 180 240 300 360 420 480 540 600 660 720 780 840 |
| <400> 1444 ggcacgaggt ggaacggtga ggcagactgtc cgcaggtggt agagcctgca tggagtgatg tcctgacttt tcttcagatg tcagcagatc tgttgtaatt tggttcaaaa tacaggcagg | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggccttc caacgggctg gtgcctccag cactcagagc gaaggagaaa tcccatgttg gttcagtttt tatatatcca | gggatccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg aggtggttt acagggtttc gctcaacaat taaatgtgta tatatatat gttaaacatt ataaataat | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc ttgtgtaggt cactagacat tctttgttt atggcatttt tatccatata tacctgaatg | caacagctcc ggagcccatg ccaccccac cgggaagcag ctcgctgctc cctgagtcat ttgttttta tacttgaaag taattgcttg aatagactag tatatctcat | ccatcagacc gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa tttttgatga gccagattac aagattgcat taaatcacag gtcatcacat actgaactgt | 120 180 240 300 360 420 480 540 600 660 720 780 |
| <400> 1444 ggcacgaggt ggaacggtga ggcagactgtc cgcaggtggt agagcctgca tggagtgatg tcctgacttt tcttcagatg tcagcagatc tgttgtaatt tggttcaaaa tacaggcagg | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggccttc caacgggctg gtgcctccag cactcagagc gaaggagaaa tcccatgttg gttcagtttt tatatatcca tgtctcatat | gggatccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg aggtggttt acagggtttc gctcaacaat taaatgtgta tatatatat gttaaacatt ataaataat | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc ttgtgtaggt cactagacat tctttgttt atggcatttt tatccatata tacctgaatg | caacagctcc ggagcccatg ccaccccac cgggaagcag ctcgctgctc cctgagtcat ttgttttta tacttgaaag taattgcttg aatagactag tatatctcat | ccatcagacc gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa tttttgatga gccagattac aagattgcat taaatcacag gtcatcacat actgaactgt | 120 180 240 300 360 420 480 540 600 660 720 780 840 |
| <400> 1444 ggcacgaggt ggaacggtga ggcagactgtc cgcaggtggt agagcctgca tggagtgatg tcctgacttt tcttcagatg tcagcagatc tgttgtaatt tggttcaaaa tacaggcagg | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggccttc caacgggctg gtgcctccag cactcagagc gaaggagaaa tcccatgttg gttcagtttt tatatatcca tgtctcatat attcataatg aaaaaaaaaa | gggatccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg aggtggttt acagggtttc gctcaacaat taaatgtgta tatatatat gttaaacatt ataaataat | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc ttgtgtaggt cactagacat tctttgttt atggcatttt tatccatata tacctgaatg | caacagctcc ggagcccatg ccaccccac cgggaagcag ctcgctgctc cctgagtcat ttgttttta tacttgaaag taattgcttg aatagactag tatatctcat | ccatcagacc gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa tttttgatga gccagattac aagattgcat taaatcacag gtcatcacat actgaactgt | 120 180 240 300 360 420 480 540 600 660 720 780 840 |
| <pre><400> 1444 ggcacgaggt ggaacggtga ggcagattaa tgggactgtc cgcaggtggt agagcctgca tggagtgatg tcctgacttt tcttcagatg tcagcagatc tgttgtaatt tggttcaaaa tacaggcagg ggactttact cactcatgag</pre> | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggccttc caacgggctg gtgcctccag cactcagagc gaaggagaaa tcccatgttg gttcagtttt tatatatcca tgtctcatat attcataatg aaaaaaaaaa | gggatccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg aggtggttt acagggtttc gctcaacaat taaatgtgta tatatatat gttaaacatt ataaataat | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc ttgtgtaggt cactagacat tctttgttt atggcatttt tatccatata tacctgaatg | caacagctcc ggagcccatg ccaccccac cgggaagcag ctcgctgctc cctgagtcat ttgttttta tacttgaaag taattgcttg aatagactag tatatctcat | ccatcagacc gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa tttttgatga gccagattac aagattgcat taaatcacag gtcatcacat actgaactgt | 120 180 240 300 360 420 480 540 600 660 720 780 840 |
| <pre><400> 1444 ggcacgaggt ggaacggtga ggcagattaa tgggactgtc cgcaggtggt agagcctgca tggagtgatg tcctgacttt tcttcagatg tcagcagatc tgttgtaatt tggttcaaaa tacaggcagg ggactttact cactcatgag</pre> <210> 1445 | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggccttc caacgggctg gtgcctccag cactcagagc gaaggagaaa tcccatgttg gttcagtttt tatatatcca tgtctcatat attcataatg aaaaaaaaaa | gggatccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg aggtggttt acagggtttc gctcaacaat taaatgtgta tatatatat gttaaacatt ataaataat | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc ttgtgtaggt cactagacat tctttgttt atggcatttt tatccatata tacctgaatg | caacagctcc ggagcccatg ccaccccac cgggaagcag ctcgctgctc cctgagtcat ttgttttta tacttgaaag taattgcttg aatagactag tatatctcat | ccatcagacc gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa tttttgatga gccagattac aagattgcat taaatcacag gtcatcacat actgaactgt | 120 180 240 300 360 420 480 540 600 660 720 780 840 |
| <pre><400> 1444 ggcacgaggt ggaacggtga ggcagattaa tgggactgtc cgcaggtggt agagcctgca tggagtgatg tcctgacttt tcttcagatg tcagcagatc tgttgtaatt tggttcaaaa tacaggcagg ggactttact cactcatgag</pre> <210> 1445 <211> 337 | gaggtgtgcc cagattgact ccagactggcc ccagacggat ggaggccttc caacgggctg gtgcctccag cactcagagc gaaggagaaa tcccatgttg gttcagtttt tatatatcca tgtctcatat attcataatg aaaaaaaaaa | gggatccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg aggtggttt acagggtttc gctcaacaat taaatgtgta tatatatat gttaaacatt ataaataat | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc ttgtgtaggt cactagacat tctttgttt atggcatttt tatccatata tacctgaatg | caacagctcc ggagcccatg ccaccccac cgggaagcag ctcgctgctc cctgagtcat ttgttttta tacttgaaag taattgcttg aatagactag tatatctcat | ccatcagacc gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa tttttgatga gccagattac aagattgcat taaatcacag gtcatcacat actgaactgt | 120 180 240 300 360 420 480 540 600 660 720 780 840 |
| <pre><400> 1444 ggcacgaggt ggaacggtga ggcagattaa tgggactgtc cgcaggtggt agagcctgca tggagtgatg tcctgacttt tcttcagatg tcagcagatc tgttgtaatt tggttcaaaa tacaggcagg ggactttact cactcatgag</pre> <210> 1445 <211> 337 <212> DNA | gaggtgtgcc cagattgact ccagactggcc ccagacggat ggaggccttc caacgggctg gtgcctccag cactcagagc gaaggagaaa tcccatgttg gttcagtttt tatatatcca tgtctcatat attcataatg aaaaaaaaaa | gggatccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg aggtggttt acagggtttc gctcaacaat taaatgtgta tatatatat gttaaacatt ataaataat | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc ttgtgtaggt cactagacat tctttgttt atggcatttt tatccatata tacctgaatg | caacagctcc ggagcccatg ccaccccac cgggaagcag ctcgctgctc cctgagtcat ttgttttta tacttgaaag taattgcttg aatagactag tatatctcat | ccatcagacc gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa tttttgatga gccagattac aagattgcat taaatcacag gtcatcacat actgaactgt | 120 180 240 300 360 420 480 540 600 660 720 780 840 |
| <pre><400> 1444 ggcacgaggt ggaacggtga ggcagattaa tgggactgtc cgcaggtggt agagcctgca tggagtgatg tcctgacttt tcttcagatg tcagcagatc tgttgtaatt tggttcaaaa tacaggcagg ggactttact cactcatgag <210> 1445 <211> 337 <212> DNA <213> Homo <400> 1445</pre> | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggccttc caacgggctg gtgcctccag cactcagagc gaaggagaaa tcccatgttg gttcagttt tatatatcca tgtctcatat attcataatg aaaaaaaaa | gggatccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg aggtggttt acagggtttc gctcaacaat taaatgtgta tatatatat gttaaacatt ataaaataat aaaaa | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc ttgtgtaggt cactagacat tctttgtttt atggcatttt tatccatata tacctgaatg aaaatgcgaa | caacagctcc ggagcccatg ccaccccac cgggaagcag ctcgctgctc cctgagtcat ttgttttta tacttgaaag taattgcttg aatagactag tatatctcat ttgtctgagg | ccatcagacc gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa tttttgatga gccagattac aagattgcat taaatcacag gtcatcacat actgaactgt taatgtgcct | 120 180 240 300 360 420 480 540 600 720 780 840 865 |
| <pre><400> 1444 ggcacgaggt ggaacggtga ggcagattaa tgggactgtc cgcaggtggt agagcctgca tggagtgatg tcctgacttt tcttcagatg tcagcagatc tgttgtaatt tggttcaaaa tacaggcagg ggactttact cactcatgag <210> 1445 <211> 337 <212> DNA <213> Homo <400> 1445 ggcacgagg</pre> | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggccttc caacgggctg gtgcctccag cactcagagc gaaggagaaa tcccatgttg gttcagttt tatatatcca tgtctcatat attcataatg aaaaaaaaa | gggatccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg aggtggttt acagggtttc gctcaacaat taaatgtgta tatatatat gttaaacatt ataaaataat aaaaa | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc ttgtgtaggt cactagacat tctttgttt atggcatttt tatccatata tacctgaatg aaaatgcgaa | caacagctcc ggagcccatg ccaccccac cgggaagcag ctcgctgctc cctgagtcat ttgttttta tacttgaaag taattgcttg aatagactag tatatctcat ttgtctgagg ttactattta | gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa tttttgatga gccagattac aagattgcat taaatcacag gtcatcacat actgaactgt taatgtgcct | 120 180 240 300 360 420 480 540 600 720 780 840 865 |
| <pre><400> 1444 ggcacgaggt ggaacggtga ggcagattaa tgggactgtc cgcaggtggt agagcctgca tggagtgatg tcctgacttt tcttcagatg tcagcagatc tgttgtaatt tggttcaaaa tacaggcagg ggactttact cactcatgag <210> 1445 <211> 337 <212> DNA <213> Homo <400> 1445 ggcacgagcc atgtcacatt</pre> | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggccttc caacgggctg gtgcctccag cactcagagc gaaggagaaa tcccatgttg gttcagttt tatatatcca tgtctcatat attcataatg aaaaaaaaa | gggatccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg aggtggttt acagggtttc gctcaacaat taaatgtgta tatatatat gttaaacatt ataaaataat aaaaa | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc ttgtgtaggt cactagacat tctttgttt atggcatttt tatccatata tacctgaatg aaaatgcgaa | caacagctcc ggagcccatg ccaccccac cgggaagcag ctcgctgctc cctgagtcat ttgttttta tacttgaaag taattgcttg aatagactag tatatctcat ttgtctgagg ttactattta | gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa tttttgatga gccagattac aagattgcat taaatcacag gtcatcacat actgaactgt taatgtgcct | 120 180 240 300 360 420 480 540 600 720 780 840 865 |
| <pre><400> 1444 ggcacgaggt ggaacggtga ggcagattaa tgggactgtc cgcaggtggt agagcctgca tggagtgatg tcctgacttt tcttcagatg tcagcagatc tgttgtaatt tggttcaaaa tacaggcagg ggactttact cactcatgag <210> 1445 <211> 337 <212> DNA <213> Homo <400> 1445 ggcacgagcc atgtcacatt</pre> | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggccttc caacgggctg gtgcctccag cactcagagc gaaggagaaa tcccatgttg gttcagttt tatatatcca tgtctcatat attcataatg aaaaaaaaa | gggatccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg aggtggttt acagggtttc gctcaacaat taaatgtgta tatatatat gttaaacatt ataaaataat aaaaa | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc ttgtgtaggt cactagacat tctttgttt atggcatttt tatccatata tacctgaatg aaaatgcgaa | caacagctcc ggagcccatg ccaccccac cgggaagcag ctcgctgctc cctgagtcat ttgttttta tacttgaaag taattgcttg aatagactag tatatctcat ttgtctgagg ttactattta | gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa tttttgatga gccagattac aagattgcat taaatcacag gtcatcacat actgaactgt taatgtgcct | 120 180 240 300 360 420 480 540 600 720 780 840 865 |
| <pre><400> 1444 ggcacgaggt ggaacggtga ggcagattaa tgggactgtc cgcaggtggt agagcctgca tggagtgatg tcctgacttt tcttcagatg tcagcagatc tgttgtaatt tggttcaaaa tacaggcagg ggactttact cactcatgag <<210> 1445 <211> 337 <212> DNA <213> Homo <!--400--> 1445 ggcacgagcc atgtcacatt ggcagatgtc</pre> | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggcttc caacgggctg gtgcctccag cactcagagc gaaggagaaa tcccatgttg gttcagttt tatatatcca tgtctcata attcataatg aaaaaaaaa | gggatccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg aggtggttt acagggtttc gctcaacaat taaatgtgta tatatata gttaaacatt ataaaataat aaaaa atataaat gtcgtggtgg tctacataat | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc ttgtgtaggt cactagacat tctttgttt atggcatttt tatccatata tacctgaatg aaaatgcgaa aattcttttc tgcatgcctg atgatttca | caacagctcc ggagcccatg ccaccccac cgggaagcag ctcgctgctc cctgagtcat ttgttttta tacttgaaag taattgcttg aatagactag ttgctgagg ttactattta | gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa tttttgatga gccagattac aagattgcat taaatcacag gtcatcacat actgaactgt taatgtgcct gaaatcattt agatctctca aaagaattat | 120 180 240 300 360 420 480 540 600 720 780 840 865 |
| <pre><400> 1444 ggcacgaggt ggaacggtga ggcagattaa tgggactgtc cgcaggtggt agagcctgca tggagtgatg tcctgacttt tcttcagatg tcagcagatc tgttgtaatt tggttcaaaa tacaggcagg ggactttact cactcatgag <<210> 1445 <211> 337 <212> DNA <213> Homo <!--400--> 1445 ggcacgagcc atgtcacatt ggcagatgtc atttatattt</pre> | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggcttc caacgggctg gtgcctccag cactcagagc gaaggagaaa tcccatgttg gttcagttt tatatatcca tgtctcatat attcataatg aaaaaaaaaa | gggatccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg aggtggttt acagggtttc gctcaacaat taaatgtgta tatatatat gttaaacatt ataaaataat aaaaa atataaatat gtcgtggtgg tctacataat tatactgctt | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc ttgtgtaggt cactagacat tctttgttt atggcatttt tatccatata tacctgaatg aaaatgcgaa aattcttttc tgcatgcctg atgatttcca ttgcaagtta | caacagctcc ggagcccatg ccaccccac cgggaagcag ctcgctgctc cctgagtcat ttgttttta tacttgaaag taattgcttg aatagactag ttgctgagg ttactattta tacttagatg ttactattta ttgtctgagg ttactattta | gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa tttttgatga gccagattac aagattgcat taaatcacag gtcatcacat actgaactgt taatgtgcct gaaatcattt agatctctca aaagaattat aaagcaaagg | 120 180 240 300 360 420 480 540 600 720 780 840 865 |
| <pre><400> 1444 ggcacgaggt ggaacggtga ggcagattaa tgggactgtc cgcaggtggt agagctgca tggagtgatg tcctgacttt tcttcagatg tcagcagatc tgttgtaatt tggttcaaaa tacaggcagg ggactttact cactcatgag <210> 1445 <211> 337 <212> DNA <213> Homo <400> 1445 ggcacgagcc atgtcacatt ggcagatgtc atttatattt tattttaaag</pre> | gaggtgtgcc cagattgact ccagctggcc ccagacggat ggaggcttc caacgggctg gtgcctccag cactcagagc gaaggagaaa tcccatgttg gttcagttt tatatatcca tgtctcatat attcataatg aaaaaaaaaa | gggatccct cagaggctgg atctaccgct atccgttggc cgggctgtgg caaccgctgg aggtggttt acagggtttc gctcaacaat taaatgtgta tatatatat gttaaacatt ataaaataat acaaaa atataaatat gtcgtggtgg tctacataat tatactgctt aagggacaga | cgcacatcct gccctgagtg gtaaggccaa ggcagcgctt aggtggaccc ggagtgtgtc ttgtgtaggt cactagacat tctttgttt atggcatttt tatccatata tacctgaatg aaaatgcgaa aattcttttc tgcatgcctg atgatttcca ttgcaagtta gtaactatta | caacagctcc ggagcccatg ccaccccac cgggaagcag ctcgctgctc cctgagtcat ttgttttta tacttgaaag taattgcttg aatagactag ttgctgagg ttactattta tacttagatg ttactattta ttgtctgagg ttactattta | gtgctgtctc aacgtgcagt gccaccttcc ctgcacatgt gtgggctgaa tttttgatga gccagattac aagattgcat taaatcacag gtcatcacat actgaactgt taatgtgcct gaaatcattt agatctctca aaagaattat | 120 180 240 300 360 420 480 540 600 720 780 840 865 |

```
<210> 1446
<211> 1777
<212> DNA
<213> Homo sapiens
<400> 1446
ggcacgagac tccatggatt ttgatgacac gtggcaccct gccacccacc cttctggggc
                                                                       60
tgtccttcct gtcctcacag ctttagcaga agccctgcca aggagtccaa agttttctgg
                                                                      120
cettgacetg etgetggett teaatgttgg tattgaagtg caaggeegat tactgeattt
                                                                      180
cgccaaggag gccaatgaca tgccaaagag attccatccc ccttccgtgg taggaacgtt
                                                                      240
gggtagtgct gctgctgcat ccaagttttt aggacttagc tcgacaaagt gccgagaagc
                                                                      300
tetggecatt getgtttece atgetgggge acceatggee aatgetgeea eccagaceaa
                                                                      360
gcccctccac attggcaatg ctgccaagca tgggatagaa gctgcatttt tggcaatgtt
                                                                      420
gggtctccaa ggaaacaagc aggtcttgga cttggaggca ggatttgggg ccttttatgc
                                                                      480
caactattcc ccaaaagtcc ttccaagcat agcttcctac agttggctgc tggaccagca
                                                                      540
ggacgtggcc tttaagcgtt ttcctgcaca tttatctacc cactgggtgg cagacgcagc
                                                                      600
tgcatctgtg agaaagcacc ttgtaccaga gagagccctg cttccaactg actacattaa
                                                                      660
gagaattgtg ctcaggatac caaatgtcca gtatgtaaac aggccctttc cagtttcgga
                                                                      720
gcatgaagcc cgtcattcat tccagtatgt ggcctgtgcc atgctgcttg atggtggcat
                                                                      780
cactgtcccc tcattccatg aatgccagat caacaggcca caggtgagag agctgctcag
                                                                       840
taaggtggag ctggagtacc ctccggacaa cttgccaagc ttcaacatac tgtactgtga
                                                                       900
aataagtgtc accctcaagg atggagccac cttcacagat cgctctgata ccttctatgg
                                                                       960
gcactggaga aaaccactga gccaggagga cctagaggaa aagttcagag ccaatgcctc
                                                                      1020
caagatgctg tcctgggaca cagtggaaag ccttataaag atagtcaaaa atctagaaga
                                                                      1080
ctagaagact gttctgtgtt aactacactt ctcaaaggac ctctccacca gaggtagctt
                                                                      1140
caaactctcc agcatgtaat aattctatca caaatctctc ctgaggctta ccaacatcta
                                                                      1200
aatgactttg catttgggga gattcaatga tttggtttgt aaagcaaggg tctgctgctt
                                                                      1260
ggttttccca ggaaaaatga acaaagatgg agagagtcca gaaacagaac tacatatatc
                                                                      1320
tggaaggagc cttctcctga aaattttgca ggacagttcc acttacctaa atcagatgaa
                                                                      1380
acacacaca aaaaatgagt ttgtaagcat tcacaagggt gaaattcaac tcacctgtga
                                                                      1440
 tttacttata aaattaatct cttcatagga attatgtgtg gacttcatga gcctcaaggt
                                                                      1500
 tttagaggga tgtgaacctg catgtatatt ttctgacagt ggagagggct ctggtgcatt
                                                                      1560
 gtgtcaccaa cagatctcct agaccatggc ttattaccaa gccctccaca gtgcaagggg
                                                                      1620
 tgctactggg gaatgggtgg gtttaaatcc tgcctctgcc attcactaga tgtagccttg
                                                                      1680
 agcatgttac cattagccct ctgcctcagt ttccctattt gtcaagccga agtaaaaagc
                                                                      1740
                                                                      1777
 agtctggaaa aatcgcaaaa aaaaaaaaaa aaaaaaa
 <210> 1447
 <211> 1940
 <212> DNA
 <213> Homo sapiens
 <400> 1447
 catccgcggc gcgggagacg agccggccgt cccgggccgg ggggacccgc ccgccatggc
                                                                        60
 caccaaggct cgggttatgt atgattttgc tgctgaacct ggaaataatg aactgacggt
                                                                       120
 taatgaagga gaaatcatca caatcacaaa tccggatgta ggtggaggat ggctggaagg
                                                                       180
 aagaaacatc aaaggagaac gagggctggt tcccacagac tacgttgaaa ttttacccag
                                                                       240
 tgatggaaaa gatcaatttt cttgtggaaa ttcagtggct gaccaagcct tccttgattc
                                                                       300
 teteteagee ageacagete aggecagtte gteggetgee ageaacaate accaggttgg
                                                                       360
 cagtggcaat gacccctggt cagcctggag tgcctccaaa tctgggaact gggaaagctc
                                                                        420
 agaaggctgg ggggcccagc cagagggggc tggagcccaa agaaacacaa acactcccaa
                                                                        480
 caactgggac actgccttcg gccaccccca ggcctaccaa ggaccagcaa ctggtgatga
                                                                        540
 tgatgactgg gatgaagact gggatgggcc caaatcctct tcctacttta aggattcaga
                                                                        600
 gtcagctgat gcaggcggcg ctcagcgagg aaacagtcgt gctagttcct catccatgaa
                                                                        660
 aattcccctt aacaaatttc ctggatttgc gaaacctggg cacggaacag tatttgttgg
                                                                        720
 ccaaacaact agcaaaaccc aaagagaaaa ttcccatcat tgttggagat tatggcccaa
                                                                        780
                                                                        840
  tgtgggttta tcctacctct acttttgact tgtgtggtag cagatcccag aaaaggctcc
  aaaatgtatg gtctaaagag ctacatcgaa tatcagctaa cacctactaa cactaatcga
                                                                        900
  tctgtaaacc acaggtataa gcactttgac tggttatatg agcgtctcct ggttaagttt
                                                                        960
                                                                       1020
  gggtcagcca ttccaatccc ttctcttcca gacaaacaag tcacaggccg ctttgaagag
  gaatttatca aaatgcgcat ggagagactt caggcctgga tgaccaggat gtgtcgccat
                                                                       1080
```

```
ccagtaatct cagaaagtga agttttccag cagttcctaa atttccgaga tgagaaggaa
                                                                     1140
tggaaaactg gaaagaggaa ggccgagaga gatgagctgg cgggagtcat gatattttcc
                                                                     1200
accatggaac cagaggcacc tgacttggac ttagtagaaa tagagcagaa gtgcgaggct
                                                                     1260
gtggggaagt tcaccaaggc catggatgac ggcgtgaagg agctgctgac ggtggggcag
                                                                     1320
gagcactgga agcgctgcac gggcccatta cccaaggaat atcagaagat aggaaaggcc
                                                                     1380
ttgcagagtt tggccacagt gttcagttcc agtggctatc aaggtgaaac agatctcaat
                                                                     1440
gatgcaataa cagaagcagg aaagacttat gaagaaattg ccagtctcgt ggcagaacag
                                                                     1500
ccaaagaaag atctccattt cctgatggaa tgtaatcacg agtataaagg ttttcttggc
                                                                     1560
tgcttccctg acatcattgg cactcacaag ggagcaatag aaaaagtgaa agaaagtgac
                                                                     1620
aaactagttg caacaagtaa aatcacccta caagacaaac agaacatggt gaagagagtc
                                                                     1680
agcatcatgt cttacgcgtt gcaagctgag atgaatcact ttcacagtaa ccggatctat
                                                                     1740
gattacaaca gtgtcatccg cctgtacctg gagcagcaag tgcaatttta cgaaacgatt
                                                                     1800
gcagaaaagc tgaggcaggc cctcagccgc tttccagtga tgtaggacag aacgggcctt
                                                                     1860
gaagagaatg ccgcgtgctt tctcctgact tggggcaatg caattcaaaa cttttttcc
                                                                     1920
                                                                     1940
cctattattc agaaaaaaaa
<210> 1448
<211> 1469
<212> DNA
<213> Homo sapiens
<400> 1448
ggcacgagga aaagcgttct aggctttcaa agtaacattg catgtgagga tggagaatga
                                                                       60
taaaacgatt cctgccttca aggcatcgtc ccggtgtttg tcagctgtgg ggcaacagca
                                                                      120
ccctctgtgt cagcaacctg catgaagagc atcatccctg caagtcctca aggcctgggg
                                                                      180
aggeeteate eceteeteat tteageaaca geacacagga caataegete tagaagaact
                                                                      240
ctttgactta aaggtatatg attgtatttg ttcctttaac atgaacgtga gtctggagaa
                                                                      300
acagctacgg ccatcccagc cctggccaag gggaaaatgc cggaagactc cagggtggga
                                                                       360
ggaagcgcgt cccaaggccc aggatctgcg aggcgacttg gggaaaacgc aggcaggacc
                                                                       420
                                                                       480
tgctgaagct cacacccgtg gaccacccag actgcctgcc gctacaggat gccctccgca
 teteccagga ettettecg geatcagtgt ggacattgae eccaetggae tgeagteaca
                                                                       540
gtggactccc aaggggcagg atccacctct gatgttcagt gaagactacc agaaaagtct
                                                                       600
 gctagagcag taccatctgg gtctggatca aaaactcaga aaatacgtgg ttggagagct
                                                                       660
 catctggaat tttgccgatt tcatgactaa ccagtgtggt tgaggagtgg gcccagggca
                                                                       720
 ccttcaaact caaccccaat gatgaggaca tccacacagc caacaagtgc cacctgaagg
                                                                       780
 tggtcacgga cctcaggttg tggatgtggc agacctgctt cacgctctcg ggcctcctct
                                                                       840
 gggageteat caggaetatg ggggattggg cagaggteag gtteetgete cagegtgget
                                                                       900
 cetggactgg cgccagatgc tggccctggg ggtttcaatc caagcataat tcagtgaagc
                                                                       960
                                                                      1020
 atgtgtttgg catgggaccc agctcactgt tttaggtcag cccaagacta ccccgtcggt
 cattetgtte etgeegteet gtgagageee caagecaaca aggeecactg gtgtgtetea
                                                                      1080
 tgaataactt tatccgggaa tcttgatggt gacctggaag gcagatggta ccctcatcac
                                                                      1140
 ccagagcgtg gagaagacca cgccctccaa acagagcaac aacaagtacg tggccagcag
                                                                      1200
 ctacctgagc ctgacgcccg agcagtggag gtcccgcaga agctacagct gccaggttat
                                                                      1260
 gcaagaaggg agcaccgtgg agaagtcagt ggcccctgca gaatgttcat aggttccagc
                                                                      1320
 ccccacccca cccacagggg cctggagctg caggatccca ggggaggggt ctctctctgc
                                                                      1380
 atcccaagcc attcagccct tctcgctgta cccagtaaac cctcaataaa tatctttgtc
                                                                      1440
                                                                      1469
 agccagaaaa aaaaaaaaa aaaaaaaaa
 <210> 1449
 <211> 1013
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> SITE
 <222> (10)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (13)
```

```
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (41)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (150)
<223> n equals a,t,g, or c
<400> 1449
gaagagcatn tenteegtgg cagaaacetg aaaatgeece nggggagaca catgeacaag
                                                                    60
acagtgagtg atgcagccat ttcccacgta tctcacaatg tacttctctg gtcttactag
                                                                   120
gactaaatga gtatctcagt ccataatcan agggagaaga accaccacag accacatacc
                                                                   180
tggggtcttg aaaataattc catgcatgtg ggactttcag aagctgtccc atgtctgtcc
                                                                   240
agaagggccc cacaatataa tggggggact ttgtatgtgg ctaagcatgg agcaggggca
                                                                   300
ggatkttcag tcccactcac tcccttggcc aagtgccctt gtgcagtgaa caaastgcac
                                                                   360
aaccatgctg ggcagaagca ttttatatca gtccccttcg gacttagtct cacaggcatc
                                                                   420
atttgatggg ggatgggaga tgaagtggtt cttcgttttc tagatacttt attctataag
                                                                   480
ttggatcacc tcaagcaaat gcgtgagtgc agctagccaa gttctctatc tcacagtctt
                                                                   540
catatggctg gctgtcgctg atgagtgagt gagctacgaa atcagcttaa agcacaacat
                                                                   600
gttattttga atttgaataa aataggraaa ggcagagtgc attgtgtgac catggggtaa
                                                                   660
gtaagacact ctccctttct ccttctcagt tttcctgtca taaaaggacm aactactatc
                                                                   720
taaggtetee gtagttaaaa tetttttgtt gtttttttt tatttgagae agtttggete
                                                                   780
attccccagg ctggagtgca atggtgctat cttggctccc tgcaacctgc gcctcctggg
                                                                    840
ctcgggcagt tctcctgcct cagcctccca gctactcggg aggctgaggc gggagaatcg
                                                                    900
cttgaacctg ggaggtggag gttgccgtga gccgagatcg tgtcactgca ctccagcctg
                                                                    960
1013
<210> 1450
<211> 1265
<212> DNA
 <213> Homo sapiens
 <400> 1450
gggcgtgcag gaattcggca cgagctgaga ccctcacccc atcacaaaac aagtcagaca
                                                                     60
gttatggggc gggcacagag ggtcaggttc tgtcaatggc ggatgggggg tgccctgggt
                                                                    120
 tgggcatcca ggggtcctgg gtgaagttga tctgcccgga cctctgtgac ctctttgccc
                                                                    180
 accatececa geeteacaeg ecaaggatta cacagtggag aateteatee geatgggeat
                                                                    240
 ggcaggettg gtcctggtgt tcctcgggat tctgttattt gaggctcagc acagccagag
                                                                    300
 aaacccccaa gatgcagccg ggaggtgaac agcggagagg acaatgcacc cttcagcgtg
                                                                    360
                                                                    420
 gtggagctca gggacagatc tgatgatccc agaaggctct ggaggacaat ctaggacgtc
 cagagggggg tgagatttca ggccacacac tgtggaaggt aatcatgtct gatcacaaat
                                                                    480
 tttgggtctc caccttactt ccaatctatg ttgtgaatgc ccagttgaga cccacggaaa
                                                                    540
 agageteatg ggtgagtgtg aagtgettet etgtettaag tteecagaga teettgeete
                                                                    600
 ttggaggcca gcaaacacta actcttgagg aattcatgac aatatcatct gattcctcct
                                                                    660
 teccagettg tatggeagte teccaeeete atgtgtteaa tetgatgate eeaggargtt
                                                                    720
 ctggaacaaa atctacagcc tatgctttct ggactatctg tcgatcattc ctgaagagag
                                                                    780
                                                                    840
 ggatcaatgt tgaggtattc atttcacmtg atgaaaatga caatatcaaa tgtcagaggt
                                                                    900
 agtagggctc acgtagaaat ccaatacatc catggtagga ctgcaaatta cttgaatcaa
 tttggggaaa atatcagaag tacccagtga aaaagaagaa acatggccgg gcgcggtggc
                                                                    960
 tcatgcctgt aatcccagca ctttgggagg ctgaggcggg cggacacgag ttcaggaatt
                                                                   1020
 cgagtccagc ttggccaaca tagtgaaacc ccgtctctac taaaaataca aaacattagc
                                                                   1080
 tgggcgtggt ggcaggtgcc tgtaatttca gctactcggg aggctgaggc aggagaattg
                                                                   1140
 cttgaacctg ggagacggaa gcaagttggc gccagttggt gcagtgagcc aaggtggcgc
                                                                   1200
 1260
                                                                   1265
 ctcga
```

<210> 1451

```
<211> 2122
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (845)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (848)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1100)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1745)
<223> n equals a,t,g, or c
<400> 1451
ggtgcgtgcg tgcctgatac acatggagcc gggctgcttc acacatctgg tgaggtcgtt
                                                                      60
agaaggtcag ataaagaaga gggcggactt gctaaccaag ctgttagaag aaataatggg
                                                                     120
agagaacatt ccttcatttc aggaggacac agagcaggct aggtctgccg cgaagactcc
                                                                     180
tatagagaga agagtattct taaactagat tctgatggac gcaacaccag ttgcataatg
                                                                     240
gttatgacaa tcagtgcccg ggtttttgac caggcatttc atggtcaccc ccacgctaat
                                                                     300
ggaaagtttc tggatcttat tttgttatag tgagtgattt gtagttttca gaacggaggc
                                                                     360
caggccaaac gtattccaaa tgaaaagaga ataggtgtca aatgctwwac cttwtatctt
                                                                     420
 cgtgttggca ctgttgccat cccgccctc tcccgacatc cccgcccttg accagcatcy
                                                                     480
 ctggccttgc ccagcattgt ctatgtattg gcactcttgc catccccgcc ctttcccagc
                                                                     540
 agagteteae tgtgteaece eggetggagt geagtggega gatettgget eactgeagae
                                                                     600
 teactgeaac atecacetee egggtteeag tgatteteet getteageet eetgggtage
                                                                     660
 tgggattaca ggcacgcgcc accacacctg gctaattttt gtatttttag tagtcacagg
                                                                     720
 gtttcaccat gttggccagg ctggtcttaa actcctgact tcaggtgatc caccctcctc
                                                                     780
 gtcctcccaa agtgctggga ttacaggcgt gagccaccat gctcagccct actcttgtat
                                                                     840
 ttttnttntt tttttttt ttgaratgra gtcagagtct caccytgttg cccaaggtgr
                                                                     900
 agtgtascgg cttgatctca gctcactgca acctccccyt cccaagttca agcgattctc
                                                                     960
 tgcytcagcc tcccgaatag ctgggattac aggcatccgc tgtcatgcct ggctaatttt
                                                                    1020
 tgkattttta gtagagacgg gggtttcacc atcttgacca aactggkctt gaactcttga
                                                                    1080
 cctcgtgatc cagctgcctn ggcctctcar agtgttggga ttacaggcgt gagccaccat
                                                                     1140
 gcctggcctc ttggaatatt taataagcta aaaaattctt atacacaggt agattaatta
                                                                     1200
 ggtagccagg agtggcccct gaaagtatgt ctggcaaaac ctagaactgc atcctagcca
                                                                     1260
 teactgtace ttetgeecte cetgetgtet cetetgeeag ttacagttaa aaggttgtgg
                                                                     1320
 gtgaggacgc tgggcagagt cccaggcgtc tgctgtcagc tccccagccc ggcctgcctg
                                                                     1380
 ccgagccatc tgggcgtccc acggtggaga gtgtggtgct tgtgacgcgg tggtgctggg
                                                                     1440
 agccatcctg gtggcagatg tgggctctca ctgcaagtca gtgtaagtcc ccagggactg
                                                                     1500
 tcagcagcac gtcctgctgc ccctctctct gcagaagccc tggtaacctg cgtttggaaa
                                                                     1560
 aatctctaag gatttctgag gagctgtcag gccatgtcct tgtccaccct gtgtggggca
                                                                     1620
                                                                     1680
 cggcttcgac atggctctgc tcccgtcgtg ggctgagaag gagcaggtgg ggctgtgcct
 tggaaaggag gccctcccga catgcctttg tgcgaggtcc ctgtccatgc tgtctccatc
                                                                     1740
 ccggnrcctt acggcgatgg gtggccacag agcctattcc aagagtctgg tttagggctg
                                                                     1800
 ggtcttccca tcttcacctc tgagtcttag gcgatgcgtg accacgcagc cccttccagg
                                                                     1860
 agtctggttt agggctgggt cttcccatct tcacctctga gtcttaggcg gtgcatgacc
                                                                     1920
 acgcagcccc ttcccggagt ctggtttagg gctgcgtgct caagagtctg gtttggggct
                                                                     1980
 gggtcttccc atcgccctgg aggaggcttt tgtctcatct catgattcac attaaactct
                                                                     2040
 2100
                                                                     2122
 aaaaaaaaa aaaagggcgg cc
```

| <210> 1452 | | | | | |
|--|-------------------|--------------------------|------------------------------|--|------|
| <211> 643 | | | | | |
| <212> DNA | | | | | |
| <213> Homo sapien | s | | | | |
| 1213, 10mg page | - | | | | |
| <400> 1452 | | | | | |
| ggcccttttg gttagc | atca ttgactaata | ctgacccaaa | cagctctaat | tcttaagccc | 60 |
| cctccaaaaa aaaaag | cata catatttta | tttgaaatga | aattattgat | agtgattttt | 120 |
| tttcatttct tgtaaa | tatt tocaccagga | agccaaaggg | gggaaaaatc | atgctatctg | 180 |
| tactagaaaa tttaac | ctgt attactgtta | tctaatatgc | tttagtggtc | ttcagactat | 240 |
| tcactaatta agcatg | ttct ttaataccac | caaataatat | tcattgttat | gcacaacaac | 300 |
| tgcaaagaga ttgagt | ccca agatetacaa | aggattgtga | gagttggtgg | ttgagatttg | 360 |
| tcacaatcag aatggg | actc aactggtacc | cacagtetta | catttactca | aatttaatcc | 420 |
| agttcaaaat tttact | acto catostttta | ttcaaatgaa | ccacaaatgc | atgatttaaa | 480 |
| gactgctggg attaca | agetg tgagccaccg | cacctgacct | taaaccagcc | cttttggtta | 540 |
| gcatcattga ctaata | ectaa cccaaacagc | tctaattctc | agccctactc | caaaaaaaaa | 600 |
| aaaaaaaaaa aaaaaa | аааа аааааааааа | aaaaaaactc | gag | | 643 |
| addadadada addada | adda ddaddadaa | | 5-5 | | |
| <210> 1453 | | | | | |
| <211> 608 | | | | | |
| <211> 606 <212> DNA | | | | | |
| | 20 | | | | |
| <213> Homo sapier | 15 | | | | |
| .400- 1453 | | | | | |
| <400> 1453 agaactagtg gatcco | agaa actacaaaaa | ttcggcacga | gctcaaactt | taaatgggta | 60 |
| agatgcccgg ctaatt | tett gtgtaggad | tagagacagg tagagacagg | gtttcaccgt | gttagccagg | 120 |
| agatgeeegg etaate atggteteaa teteet | tanga ttataataa | cccacctcaa | cctcccaaaq | tactaggatc | 180 |
| acaggcgtga gccaco | ange ecgeccade | tecttetat | atgettttet | ctctgctgca | 240 |
| tttgggattt tgtgca | cacge geggeeaggg | · aatacttttc | cagatggcta | tccctatccc | 300 |
| tggggattt tgtgca | acaty agreemance | ctcactcatt | tagatcacaa | ggactgggcc | 360 |
| tgttcctgtg tcttc | taata ettateeea | cctatttca | ttacagtaag | tttcccctqa | 420 |
| gctcataaag ctggto | eggig citaticiae | tttcatcct | tttttaacta | ttacttgctt | 480 |
| gttaattttt ccata | color ricacitics | cacaactoto | attttacta | ggatcgtatt | 540 |
| aaatttacaa attgta | tgage atggtagtte | cagaactgtg | 222222222 | aaaaaaaaaa | 600 |
| | accgy addadadaa | aaaaaaaaaa | aaaaaaaaa | Ci C | 608 |
| aactcgag | | | | | |
| 040 4454 | | | | | |
| <210> 1454 | | | | | |
| <211> 1277 | | | | | |
| <212> DNA | | | | | |
| <213> Homo sapie | ns | | | | |
| 100 1151 | | | | | |
| <400> 1454 ggcacgaggg caagc | assat socattoca | r tagaaacata | teattetaca | acttetteaa | 60 |
| ggcacgaggg caage gggcgaggtt ttcca | goget goggtoogs | , tagegeeeeg | gtgtgtgcca | agtgtggcta | 120 |
| tgagctgttc tccag | gaact acceegaac | c acactcotct | ccatggccgg | cgttcaccga | 180 |
| gaccattcac gccga | caged teaccaace | r tooggageac | aatagatctg | aaggettgaa | 240 |
| ggtgtcctgt ggcaa | cageg eggeedage; | t adaccacdad | ttcctgaacg | acggccccaa | 300 |
| gccggggcag tcccg | glyly ycaalygge | r carctereto | aagtttgtcc | ctaaaggcaa | 360 |
| agaaacttct gcctc | acce gaacaceca | c addcadccca | cacccacccc | agacggccac | 420 |
| cacactgagg ccaca | catta accettace | c cttagaatta | gaaccctggg | catcaagaca | 480 |
| ggaaggcagg gcgca | ataat taaaacatc | a ddacactccc | aaaaccccaa | ctctgaacaa | 540 |
| gaaggcagg gcgca gaccttttcg tttct | tagaa aagagacto | a tttqctqatq | gttcatgcct | tctqctqqqa | 600 |
| caggcctggg ctgtg | reacc acactetes | a ctaacttaac | ccctactca | ctctaggtgc | 660 |
| ctccaggagg tgagc | reated atacegory | a tetetaaato | r acgttacacc | ctcaccttct | 720 |
| tttcctggcc ctgtc | tataa actataaca | t ataaaacca | attccaagac | agactctcgt | 780 |
| cctcaccgaa gctta | agggg activities | a doctocttac | gagacagaat | ggaaacggag | 840 |
| gccgcccctg ccagc | iggeee acatetee | t cactocatos | , gagacagaaa , tacaatataa | tcaaaccctt | 900 |
| gccgcccctg ccago ccaggccagc cagag | tagge liggedeligg | a acctactage | a aaggcaggct | gatggggcac | 960 |
| ccaggccagc cagag | tagag alggleigt | a acctasacco | tatttcacaa | tctatacaaa | 1020 |
| accettggce teteg | ittata atta | a caactatta | tccataactc | taaccagcac | 1080 |
| agtagcttgc ctcac | cttetg ettaggaaa | g eggetgitgt | , .ccataactc | . Jaaccageae | |

```
agggctgagg cctgcagtgc acacctgcag ggaggccctt cccaaggtgt ggtgactgtg
                                                                   1140
ccttactgta catgctcgga ggcctggcca tataggaggg tgggtgatgc tgaaatcacc
                                                                   1200
ccccatctta agtaattact ttctggagta atcaggtgga aatccataga caaatgaaaa
                                                                   1260
                                                                   1277
aaaaaaaaa aaaaaaa
<210> 1455
<211> 1982
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (666)
<223> n equals a,t,g, or c
<400> 1455
                                                                      60
ggattgtaac acatgacaaa gtttgagaac tactgacagg aagagtcctg ctgctgagtt
                                                                     120
ctaggcccag ttctgtcact ggctcactaa atgacttcag gcatgtccct ctcctatttt
                                                                     180
gaacttcagt tttctcttct gtgaaatgaa agccttggac taggcagcgt ctaaaggctc
tgtcactccg taattgtgtg actttggtaa ctttgtttga cttctccttg cttaagtttt
                                                                     240
                                                                     300
ctcatatggg tatggtaagg aaaataccta cctcacagga ttttctaaca attttgtgat
                                                                     360
tattaagtat gatgactgat gactaatata tgacagccag ctcttacaca gtgctttcta
tatcctggac tgttgtaagt gcttttaatc cccgcaacaa tcccatctcc attttacaaa
                                                                     420
tgaaaaatag aggtcacacg gctaatacgt gtcagagttt ggattaaaac ccagaaaaat
                                                                     480
ctgtccccag agacaatgat tttaactagc atgccctttt gctcaataaa tgttaattcc
                                                                     540
ctcacccttt ccacacacac acagtctagc tgaccattca tagacaataa tcccactttc
                                                                     600
acagtccatc caacaagatc ttaaaaaaac catgaaaatc tctaggtttc ttttgcaaat
                                                                     660
agtttncaag catttaaaaa aaaaaggtgg ggggcgggga gggagtggcc aaaatggctg
                                                                     720
actaaaagca gctaggatga gtggttctca tggaggggaa ggaaaggggc gagtaaatac
                                                                     780
agcgccttca actgaaacat ccaggtaccc acattgggtc taatcaagga aacaactcga
                                                                     840
tccacagaga atgaagaaaa gcaaggcagg atgacagccc acccaggagc aacatggaga
                                                                     900
                                                                     960
cagaggaacc tcctccaccc agggaagtcg taagtgaatg tgcgatcctg ggaaaccacg
                                                                    1020
ctcctcccat ggatccttgc aacccttggg tcaggagatc ccctggtgaa cccactccac
                                                                    1080
cagggccttc agtctgacac acagagatac atggagtctc agcagagtag ccgcttgagc
                                                                    1140
acgtgcagag acccagcagc tttacatact ccggccctgg gtttcccagc aaaagtaact
gcaactcctg caaagcggga gattagaccc ctgtacatac ccctaggaaa gaggctgaat
                                                                    1200
ccagggggcc aagcggcacg atctgcgggc cccacttcca ctgcacctca caggataaga
                                                                    1260
cccactggtt tggaattcca gccagccacc agcagcagtg ttgcacctac ctgggacgga
                                                                    1320
                                                                    1380
ggtcccaggg ggaagggcag gctgctctct gggacagagc tcccagaagt ggtaccccag
aacagcacag cacagctgct cttcagaagc atggccagac tgcttcttta agcaagtgcc
                                                                    1440
caatctgttc ctcctcactg ggtgggactt ttcaaccaag gcctccagca acccctactg
                                                                    1500
gtgttctctg gctgacagag atttgaattc tccctgggac agagttcccg gagggaggga
                                                                    1560
ggggccacca tctttgctgt ttgggcgact tagctgttcc ggcctccagg ctttggagag
                                                                    1620
                                                                    1680
cccacaccaa ccaggggtgg aagcagtgcc ccagcacagc acagctgatc tgtgaaagca
                                                                    1740
tggacagact gcttctttaa gcagttccct gatcccgttc ctcctgactg ggtgagacct
                                                                    1800
cccaaccagg gtctccagcc ttgtcctgca ggcgcatttg ggctggcaac aggtctgtac
ctcgctgggc cggagctccc agaggaagag gcaggatgac atctttgctg tttcacagcc
                                                                    1860
ttcactggtg atagctccag gtactggaaa atccaaggag actaggaact ggagaagaag
                                                                    1920
1980
                                                                    1982
<210> 1456
<211> 1600
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (95)
<223> n equals a,t,g, or c
```

```
<400> 1456
ctccattaag aattcattac taatagcaga agattttaaa ctatctctgt tggtagatga
                                                                    60
agtgattctt gcatagatag agagagccat ttgtnaccac agctggctaa gtccccctcc
                                                                   120
ttccttcact tagtctgtat tagtttgcta gagctgccat aacaaaatat cagagtctga
                                                                   180
gtagctttaa caacaggaat ccactttctc acacttctgg aggttggaaa cccaagatca
                                                                   240
aggtgctggc agggtgggtt tcacagagag ctttcaagga aggatctgtt ctgggccttt
                                                                   300
ctttttgaca tgtagatggc tgccctttta ttgcctcttc atctgtgtct gtgtgctcct
                                                                   360
gatgtctctc tctgtgtgtc caaacatcat cttataagga caccagtagg aacggattag
                                                                   420
                                                                   480
gtcctaccct aatggtcaca ttttttactt gattttctct ttaaaggctt tatatccaaa
tacagtcatg gtctgaggta caaggtgtta gggcttcaaa catacgaatt tgtgggagtc
                                                                   540
aattcagctc ataacatagt ccatgagctt gtactaattg gaagtgagga ttaggttttt
                                                                    600
agttgtttcc ttccttccaa ttactctaga tctttctcca cttccagttg accaatccct
                                                                    660
teatgetgee ageceeacat ttgacttgae tgeetttace tacactetee agtetttgtt
                                                                    720
attettteet teeteacate caaatgtaae tetgecacaa cecaetagae etetattagg
                                                                    780
aatcatttga aaactaaaaa gtaaaacatc tatttgaccc ccttgaccca tgctttctgg
                                                                    840
ctgcatatta aaaataatag caaaaatcat gattactttt gcaccaacct aatattaaaa
                                                                    900
tcatctgggg tgttttataa aaatacctat gtctgggccc taataccaga tcttctggtt
                                                                    960
tggttggtgg agtgaggccc gtgttcctga tgatctgacc actctcatac atttctgtct
                                                                   1020
gtgcttctct tagcctaaaa tgctctgtgc tttttttcca actcatgaat tcttatctat
                                                                   1080
tegaatttat aggtggaetg teactteete aagaaageet eeateagtta eeceagggta
                                                                   1140
gtgtattagg gtcagtctag cagagcagta ggtaacgtga actaaaggca tagagacctg
                                                                   1200
agtgtgaatg tettaetttg atetttetta accaggggae tttgaacatt ttettaagee
                                                                   1260
tgttgagcct cattgkggta atcatgaaaa gggaaagtct taaagcatgt cacatagggt
                                                                   1320
tgatgtgaga attaagaaaa ttaccatatg tatgcttcct agctggtagt acatgtccat
                                                                   1380
ttaataatct ctccttctgg tggcgggcac ctgtaatccc agctacttgg gaggctgagg
                                                                   1440
caggagaatg gcgtgaaccc gggaggcgga gcttgcagtg agccgagaca gcgccactgc
                                                                   1500
1560
                                                                   1600
ggaattcgat atcaagctta tcgataccgt cgacctcgag
<210> 1457
<211> 1818
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> SITE
 <222> (1007)
 <223> n equals a,t,g, or c
 <400> 1457
 ccccgggct gcaggaattc cccacaccta gcctacattc tttttaaatt ttttgttttt
                                                                     60
 agttgaccta taatacttgt agaaagacaa agaatacagt gtgatgtttc agtgcatata
                                                                    120
 tgcattgtat aaggatcaaa tgagggtaat tatatccatc actaagcatt tatcatttat
                                                                    180
 ttgttgtggt aatattcaaa atcttctctt ctagctatct tgaaatgtct atcacattgt
                                                                    240
 tatttgctgt actcacctta ctgtgtaatg gaacaccaga acttattctt cctgtctgat
                                                                    300
 tgtaacttaa tacccattga aacaacttct catggtcccc cccttccccc atactcccca
                                                                    360
 gccataggta accactgttc tattctctgc ttctgtgaaa tcaactttta aaattcaagg
                                                                    420
 gtgaaattac acagtgtttg cctttctgtg ccttgctatt tcacttaaca taatggcctt
                                                                     480
 taggttcatc catattacca caaacgacgg aagaatattc tgtttataat gttccatttt
                                                                     540
 gtgtgtgtgt atacacagac acacggcatt ttctttgtcc attcatctgt agatgggtgt
                                                                     600
 ttaggttgat tcatgtcttg actattgtga atggcactgc agtaaacatg ggagtgcaat
                                                                     660
 tatctcttca atatactgat ctcatttccc ttttgattta cacccaaaag catagggaac
                                                                     720
 aaaagcaaaa acagacaaat gggattacat caaactacaa agcttctgca cagcaaagga
                                                                     780
 aacaaacaat atagatcgaa gagacaacct gaagaatagg agaaagtact tgtaaacttt
                                                                     840
 900
 aattcagtta aaaaatgggc aaaagacctg cgtagacatt tctaaaaaga acacatacaa
                                                                     960
 atggctgaca gatatatgaa aatatgctta acatcactaa ttatcangaa aatgcaaatc
                                                                    1020
 aaaaccacag tgagatacta cctcacccca gtcagaatgg ctgttctcaa aaagacaaag
                                                                    1080
 gataacaaat gttgggaagg atgtggagaa aggggaactc ttatgcactt ttgatgagaa
                                                                    1140
 tgtaaattag tacaactatt atgggaaaca gtatggaggt tctcccgcct cccccagagg
                                                                    1200
 caggttetet etetgttgee caggetggag tgeagtggtg taateatage tegettggee
                                                                    1260
```

```
tcaaacttat gagctcaagt catcctcttg cctcagcctt ctgagtagct gggactatag
gtgtgtgcca cgtcatctag ttagttctta attttttata gagacagtgt cttgctatgt
ttcacaagct ggtcttgaac ttctggcctc aagcaatcct cctccattgg cctcccaaag
                                                                     1440
cactgggctt tataagcatg agccacccta cccagctgga ggttcttcac aaaaaaagat
tggctatata tccaaagaaa ataaataata cattctttca tagcaaaaga gaggatcagc
                                                                      1560
atatattaaa gagtgcttat tttaccactg aacaagttgt aaaagtagac gttcttaagc
                                                                     1620
tcatgagcct gtggtaaata ctaggtagtc actcaaaatg tgtagatttc aagcatactt
                                                                      1680
tggactttgg aagtagacac atgagattgt agcacggaat cctaaaatcc taggccaaag
                                                                      1740
aagactttta gaaatcatag ttcatactgt ttcttttatg caggatttag ctaatccatc
                                                                      1800
                                                                      1818
ttagaaaaaa aaaaaaaa
<210> 1458
<211> 1264
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1101)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1136)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1152)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1156)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1159)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (1170)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (1175)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (1197)
 <223> n equals a,t,g, or c
 <400> 1458
 cgtgtgtgtg tgtgtgtgt tgtgtataat cattgataaa gacaaactaa ttttttgatc
                                                                         60
                                                                        120
 taaattctaa gttaatttcg tcacttgtta tgtgtgtctt atttttattt tgtcagacca
 cagataattt gtttcttact ccttgactac cttcttcttt ttagatggcc aaatgtgatg
                                                                        180
 cttgtaagcg acagggtaaa ctcagtgagt ccttgaaatg gcgaggggaa atgaaacatt
                                                                        240
```

<210> 1460 <211> 2077

```
300
tetgtaacet getttgtate ttgatgttet gtaateagea aagtgtatgt gaceegeett
                                                                 360
cacaaaataa tgcaggtaaa attaacctta ggtactgaat ggagtctttg gtcaatacta
                                                                 420
ggaactactg ttcttttaca gatcaggaac tgtgtaaaca gttgtcatta atttcatgaa
acctcagttt ccttgtattc tgtatcaata acatttagct ttttttgttg aacaccttat
                                                                 480
                                                                 540
ttcactgtcg tccgtgtgaa gagaccacca aacaggcttt gtgtgagcaa caaggctgtt
tatttcacct gggtgcaggc ggtctgagtc tgaaaagagt cagtgaaggg agatggggtg
                                                                 600
gggccgtttt ataagatttg ggtaggtaaa ggaaaaaggg gggttgttct ctggcgagca
                                                                 660
ggagtggggg tcacaaagtg ctcagtgggg gagctttttg agccaggatg agccaggaaa
                                                                 720
aggaatttca caaggtaatg tcatcagtta aggcaggaac aggccatttt cacttctttt
                                                                 780
gtgttggaat gtcatcagtt aaggcaggaa ccggccatct ggatgtgtac ctgcaggtca
                                                                 840
gaggggatat gatggcttag cttgggctca gaggcctgac accttagatt aaagctgagt
                                                                 900
aaaaatgagt ttttgattaa atagatttct ttgagaatat tgaatcaaat aaactctgta
                                                                 960
agaacttaaa tttatgggaa aggataacag ttaatggttt gtaattgagt ataattggct
                                                                 1020
tccttaaaaa atcctttgag actacttata acaaaagaca taaagtcaaa atcacaggcc
                                                                 1080
ttttaaatat accatgtgca ngccagatgt gatggttcat gcctgtaatc ccaccncctt
                                                                 1140
tggaatgctg angtgngang acggcttgan gccangagtt caggggtgga gtgagcngtg
                                                                 1200
accacagcac agcaatccca gctggatgat atagtgagac cctgcctcta aaaaaaaaa
                                                                 1260
                                                                 1264
<210> 1459
<211> 1366
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (758)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (858)
<223> n equals a,t,g, or c
 <400> 1459
gaattccgta acataaactg tggttctcag tctgttagct attcagattt ttcacaatgg
                                                                   60
tttttgatac gtaatgagaa ataacctact aagtaaatag gaccccttgc tcaaagaagt
                                                                  120
180
 cttctctgct tattcttttt tctccctagg cacagttcga gtgacaactg ctgcccatct
                                                                  240
 tgcactgctg gtggctaaaa acatctcctt ctttcccagc aatgtggagc aattttctga
                                                                  300
 360
 ctactgaaac agcacaaggt attttataca acttttttt tacaaaagtc tttctccctt
                                                                  420
 ctgtcctggt tcacaggaca gacaaattct tcctctgatt ataatagtgt tggggtttag
                                                                  480
 aatcagaaga, gttggaagtt attctaggct ttcccatgat cccactttca aacaagagaa
                                                                  540
 atcattgtct ttgtatttga tacctactta tctccaagtg aaattcagcc aattaataaa
                                                                  600
 gttccatatg agccctaggg gaaaacaaca agtgaacaca tctttttta aaaaatactg
                                                                  660
 aaaacttaag gtatatgtat atgtgtgtat tgcacgcata tatgcgctca ttccgtggta
                                                                  720
 agactaatta aatgagattt aaaatagtaa atatatantc tgcatgttgt cattgataca
                                                                  780
 840
 tcttgttatg aaattaanga ctccttaaaa ctgtattaaa tgtggtgttt agtcaatctt
                                                                  900
 ttgccctaat acaataacat agcaagtrgg aagctaggac aaatagcctt atactacata
                                                                  960
 tagcaaggtc ttctagmcca caatgtctaa tgtcttagga aataaccttt tttgcctcct
                                                                  1020
 tgctctaatt tttcacatgt gtatgtcact ctctcaggtg tggcgaaagt gcagcatacg
                                                                  1080
 gatcttcaca gtagcccaat tagaagacaa cagtatccaa atgaagaagg acctagccac
                                                                  1140
 cttcctatat cacttacgca ttgaggcgga ggtagaagtg gtggagatgg tgagaaagct
                                                                  1200
 gagtttgaga tacaagaggt tcattccccc attcctctcc ctgtcttcct tgaatctttt
                                                                  1260
 ctggtttggg aaatttttca gatctaaatg tggattaatc ccctagtgcc aaaaaaaaa
                                                                  1320
                                                                  1366
 aaaaaaagga attcgatatc aagcttatcg ataccgtcga cctcga
```

849

```
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (936)
<223> n equals a,t,g, or c
<400> 1460
aattcctaag atgatagcag taatgaagag aaatggacct tgagtttcag aaacttgtat
                                                                       60
tctaatggac cttcaaaaga tggcaagtat tgtgtctgga attggtgggt tcttggtctc
                                                                      120
gctgacttca agaatgaagc cacggaccct cgcggtgagt gttacagttc ttaaagatgg
                                                                      180
tgtgtctaga gtttgttcct tcagatgttc agatgtttct ggagtttctt ccttctggtg
                                                                      240
ggtttgtggt cttgctggct tcaggagtga agctacagac cttcacggtg agtgttgcag
                                                                      300
ctcataaagg tggcgcggac ccaaagaatg agcagcagca agatttattg caaagagcca
                                                                      360
aagaacaaag cttccacagc gtggtaaggg gacccgagtg ggttgctgcc gctggctcgg
                                                                      420
geageetget tttatteeet tatetgacee cacceacage etactgattg geecatttta
                                                                      480
tggagagctg attggtccat tttacagaga gctgattggt ccattttgac agggtgttga
                                                                      540
ttggtgcgtt tacaatccct gagctagaca cagagtgctg attggtgtat ttacaatcct
                                                                      600
ctarctagat gtaaaagtct ccaagtcctc actagattaa ctagacacag agcactgatt
                                                                      660
ggkgtgttta caaaccttga gatagacaca gggtgctaat tggkgkattt acaatccttt
                                                                      720
agctagacat aaaggttctc caagccccca ccagattagc tagatacaga gtgctcattg
                                                                      780
gtgcatccac gaaccctgag ctagacacag agtgctgatt ggtgcatata cagtcctcca
                                                                       840
                                                                       900
gctagacata aaagttctcc aagtcgtcac ctgactcagg agcccasctg gcttcgccta
gtggatcccg cgccagggcc gtgggtggag ctgccnaccw gtcccgcacg gcgcctgcac
                                                                       960
ttytcagccc ttggcagtca atgggactgg gtgccgtgra gcagggggtg atgcctgttg
                                                                      1020
ggraggeteg gtecatgetg gageceaeeg eeaggggget eggeeatgge gggetgeagg
                                                                     1080
tecegageee tgeecegegg ggaggtgget gaggeetgge gagagttega gtgtggeaeg
                                                                      1140
ggcagtctgg cactgctggg ggatccggcg ctccctggcc tgggtgctaa gtccctcact
                                                                      1200
gcccggggcc ggccggcttc tctgagtgtg gggcctgcca agcccacgcc cacccagaac
                                                                      1260
tttcactggc ccacgagcac cacacgcagc ccgggttccc acccgtgcct ctccttccac
                                                                      1320
acctccccgc aagcagaggg ggctggctcc atacttggcc agcccagaga ggggctccca
                                                                      1380
cagtgcagca gcggactgat gggctcctca agggtggcca gagcagacgc caaggccgag
                                                                      1440
gaggcgctga gagcgagcga gggccgccag cacgttgtca cctctcagta tgagtgtgtt
                                                                      1500
gtagtgtatg tgtgaaaggg agttttgcaa tgggagtatg ggatgatgtg ttagtcatag
                                                                      1560
 ttctacagag aaatagacta tctatctatc tatatctcag agagagagag agagagagat
                                                                      1620
 tgagtgtaag gaattggctc atgcaattat ggagaccaag tgccaagata tggagacagc
                                                                      1680
 aagctggaga ctcaggagag ctgtggcgta gtagtttctg tccaagtcca gaggcctgag
                                                                      1740
 aaccaggaga gccagtagta taagttctag tctgaaagct ggcaggccca agaccaagaa
                                                                      1800
 gagcccaagt ttcagtttga gtcccgaagc aggaaaagac tgatattcca tttcaagcag
                                                                      1860
 tcagacaagt cttatggcag ggtcagcctt ttagttctct tcaggccatc aactgattgg
                                                                      1920
 ataagggcga ctcacattag ggagggcaat ttgcttccaa ttcagctgtt tatctcatca
                                                                      1980
 aaaaacaccc tcacagacac acttggaata atgtttgacc aaatgtctgg acactttgtg
                                                                      2040
                                                                      2077
 ccccagtatc aagcttatcg ataccgtcga cctcgag
 <210> 1461
 <211> 1993
 <212> DNA
 <213> Homo sapiens
 <400> 1461
 ccagatatca agataagaaa ggtttgaaat gctcagtgtt aaaataggat cacaggtcat
                                                                        60
 tgtaaaacag tcatttaaac aaagtgataa gtcagtgatt tttaaaaagt caaaacctgt
                                                                       120
                                                                       180
 gctctttgat tagcaggaga ctccatcaaa gagtaagttt gaggagactg tatcaaagag
 taagactcca tcaaagactc acttttccaa ataagaccta ataaaggcag catgagctca
                                                                       240
                                                                       300
 agaaaatctc tctctccctc cttttctttt gtagtttact caaaagtaaa caaaaccttt
 tactatctcc tgttaacact acctgaaaat cttgttcaaa agagaaaacg aaatcctacc
                                                                       360
 tttgtatcag tatattatta atattaaacc taattttaat aaaatcttac aataaacaga
                                                                       420
 tccatctgat cccagtcagc tttgaccaga taagattttc atgaatcttt tataaactct
                                                                        480
 tacaatttta atttttcttt ctccaacttt ttagttttag ctatatcatg taaattttga
                                                                        540
 aacaatcttt aacctctaaa ctaggcaaaa ttacttttcc tttagcaaaa ctcacaccct
                                                                        600
```

| | 660 |
|--|------|
| cctctcttt ttataacttt cttcaccaaa aacacatcct actttcattg tatactttgc | 720 |
| The research of the constant after antiac title action at a tale tale tale tale tale tale tale | 780 |
| | 840 |
| the state of the stage of a strattica together a gadayatate columnation | |
| to the same agreement to the fattation canaliciand yallactade against and | 900 |
| the transport the transport and a second all all all all all all all all all al | 960 |
| | 1020 |
| offorttat tasacctasc atdacticad dattitudade tuttguades | 1080 |
| attacaga de | 1140 |
| | 1200 |
| the serve astastansa consagansa addanad tytyaayata acgeorgan | 1260 |
| The same to add a day a | 1320 |
| The standard dastreasty agencial alagered against | 1380 |
| | 1440 |
| and the contract of the contra | 1500 |
| gacaagtctg aagacattct aattttattt taccaacaat taaaaagcta attttatttc | 1560 |
| the standard of the standard o | 1620 |
| the set together catotagaca atatacaaac adatcigiac acatacacac | 1680 |
| ataaaaatac aaacataagt gaagatttca tagctttgat ataaaaattc tagccatgag | 1740 |
| ataaaaatac aaacataagt gaagatttea tagaattaa agttcataaa tagaacaagt acaagtaaaa ctcgctattt taaaaggaca ttggattcaa agttcataaa tagaacaagt | 1800 |
| acaagtaaaa ctcgctattt taaaaggaca ttggattatt agataacaag tagcaaattt tcaagtttat tgtatatgcc tgaagccctt accaagttt aaataacaag tagcaaattt | 1860 |
| atatttcaag cacagagaat ttaagctttc caaaaaggcca attcaatttt acgttatctt | 1920 |
| atatttcaag cacagagaat ttaaggttte cagtagagaca taaagggctt tcttctacaa | 1980 |
| tggcaaaaat catgttaaca gaatccaaaa gagtaaaaca taaaggcctt tcttctacaa | 1993 |
| aaaaaaaaa aaa | |
| | |
| <210> 1462 | |
| <211> 1932 | |
| <212> DNA | |
| <213> Homo sapiens | |
| | |
| <400> 1462 | 60 |
| cgcctccatg ggtctgcaag acttttgctc cgtccagtgc caaagcctta gcagatcctg | 120 |
| gcatggatgc ctcaggctga tggcaccggc cttgcaatga gacgagaacc caaagctcag | 180 |
| ttatcagtgt cctgtcttgc tgctatgagc tttttgtact gataacgacc atttctttac | 240 |
| trateagree congresses agreement transcription to the transcription of th | 300 |
| and an aggregate charlatace acticated gayyadacty gerotousus | 360 |
| | 420 |
| www.managa aagetgetgg ccaagtgace tggcagggg tggccagege ggccaggg | 480 |
| | 540 |
| | 600 |
| the managed of the state of the | 660 |
| and the transmitted and additional actions and actions and actions and actions are actions and actions and actions are actions are actions and actions are actions are actions and actions are actions are actions are actions are actions and actions are actions are actions are actions are actions at a constant actions are actions and actions are actions and actions are actions are actions as a constant actions are actions as actions are actions and actions are actions as a constant actions are actions and actions are actions at a constant actions are actions actions are actions actions are actions actions and actions are actions actions are actions actions actions are actions actions are actions actions acti | 720 |
| tattaaaaca gaaaaaagat gagaatggaa acaggcgaaa citaccaage gaaaaaaa | |
| the agranging gaaggttta attatttaa aaatagagat ggggtctcac | 780 |

ctggaactga aggagggtgg gaaggtttta attattttaa aaatagagat ggggtctcac

tatgttgccc aggctggtct caaactactg ggctcaagtg aacctccttc ctcggctccc

aaagtgctgg gattacaagc gtgagccact gtcccagcag ggaggtgttt tttttaaagc

tgattcactg gaggcagggt gggcaagtgg cactgctggt ggccacccct cacagtccct

gctgccccca gtaccgcctg gcacccatcc cccgggcccg ccacgacttt gcctgcgcca

gcctgatctt cgtctgcatc ctgctcgtcc atgtcctgct catgcccagg tcagttgcag

ggaggggtgt gggggtccgg cctgctggga tccaggctgg aaggtgacta tgaacctgca

aggagetgtg tgatttggge tggaaggggt eggetgetgg ggteetagea aetggaeeag

gggctgtggc agcacactt gagttaccaa cacttctttt taatagaatg tgtgttttct

gccacaggcc tecetactee ctaacgtete teteeteage cacetgteat atgtgtggee

tgcatgcatt ttggttgaca gcccttgcct taggtgtttg gagtgctagg aggatagact

ctgaaaactg taggcgccat cctttttctc ttatatatag ggaaattggg gcacagagga

ttaatgattt atccaaaact cactgagatt catgcttctg gctctagggc cctgctggtg gggtataggg atgagggtga agtcagaggg aagggggatc taaggtcagc tacttggtgc

tttctagaag agcagttagg ccgaagcatc gaccaggatt gtggttttgg ctatgcttac

taaagacata atagggaggc tgtgcgtggt gactcacgcc tgtaatccca gcactttggg

aggctgcggg gcgaatcact cgaggtcagg ggtttgagac cagcctggcc aacatggtga

aaccccgtct ctaccaaaaa tacaaaaatt agctgggcgt ggtggctggc gcctgtaatc

840

900

960

1020

1080

1140

1200

1260

1320

1380

1440 1500

1560

1620

1680

1740

1800

```
ccagctactc gggaggctga ggcaggagaa tggtgtgaac ctgggaggcg gaggttgcag
                                                                   1860
tgagccgaga tcatgccact gcactccagc ctgggtgaca gagtgagact ccatctcaaa
                                                                   1920
                                                                   1932
aaaaaaaaa aa
<210> 1463
<211> 1541
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (282)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (335)
<223> n equals a,t,g, or c
<400> 1463
aattccgcct ttgattcctt ccctctgaag acagacaaaa tcctgactta ggcagtattt
                                                                      60
tttaaaatac caagggtctc ggaaacctag ggtttgataa gtaagaggaa cagatcaaat
                                                                     120
tctaaatctc ctttgtccac attgtcattc tccagcttgt tgttcttttc agtggtgagg
                                                                     180
taagaatata actcctactt aatgttcctg ttccttaggt gaaacactac caccttttgt
                                                                     240
tcaaaagtta gatgctgggg ttgttgctgt tgttgttttc tncttttctt ccttactttt
                                                                     300
tagattttga tggagacgtg gtaggaagtc tgggnctggg aaatgaggtg aaaaagaaaa
                                                                     360
gcaattagtt tgtctttata caaaataaaa ccttctaaaa aaccttatta tcacaaaaaa
                                                                     420
 480
 taatttggga gggctgggca cagtggctta tgcctgtaat cccagcactt tgggatgctg
                                                                     540
 aggcaggcag atcacctgag atcaggagtt tgagaccagc ctgsccaaca taatgaaacc
                                                                     600
 ctgtytctac taaaaataca aaacattagc tgggtgtggt aacacacgtc tgtggtctca
                                                                     660
 gctactttgg aggctgaggc acgagaatcg cttgaaccca ggaggcagag gttgcagtta
                                                                     720
 gctgagattg tgccactgca ctccagcttt ggtgatagaa cgagattcca tctcaaagct
                                                                     780
 aaacaacaac aacaacaaca ataacaacaa caaaaacatg tataactggg aaaaaactga
                                                                     840
 aagagaatgc aggatcataa aaatatagca aacaaagtga gtgggattta aaattagtgg
                                                                      900
 aataagaaat aatgggtaac aatgaagaac ataatttagg taatagtata gtatcttggg
                                                                      960
 agccctcctg gaagtatcta gttatggaca gtgagcagca gaaacaggat gtaactcaat
                                                                     1020
 tcagcatact tgatggttgt ggtaacccta gaaaatgact ccaggaaata ggtgagaatc
                                                                     1080
 caatcagatt gagaggstaa tgttcatgac aggggtgccc tagcagacag gcaaagctga
                                                                     1140
 atagaaattc aggaggagag gaattttggc tatttagtaa aattatgagc agttggtcat
                                                                     1200
 aggcaaattt tatgagtagg tagcccttct gaagtcttag gcatataatt aacctaggtt
                                                                     1260
 ggaattataa ttagacatca aagtttaaac ttttttatct gaaccgagat gcaaaagtaa
                                                                     1320
 attggttctg tgttctggag aattgtaaaa gaattcctta attccttagc aaaatttgga
                                                                     1380
 agtcagtatc aagtggtgag gataggaaag ttgaagagac tgtggaccag gcaagacctt
                                                                     1440
 atcagttgat ttaggaagca gcagtgacag aggccagaca ggtaacaaga aaaaaaaaa
                                                                     1500
                                                                     1541
 aaggaattcg atatcaagct tatcgatacc gtcgacctcg a
 <210> 1464
 <211> 934
  <212> DNA
  <213> Homo sapiens
  <400> 1464
 ctcgaggtcg acggtatcga taagcttgat atcgaattcc ttttttttt ttttttca
                                                                       60
  gtggagaaga agggagaga agaggaagta gctggaggca ggaaacttgt actgatccat
                                                                      120
  gcacctetet acttgttete tttgtcatea agggcaccat atagetgaaa ggcaggagga
                                                                      180
  tagggagagg gccacctctt catatcactt ctgtgccttg gaaagctctt ctccctggat
                                                                      240
  accaccggat aaagacctac acttctctcc ttgttgtgtg cacctgttca ctggagcaca
                                                                      300
  tgcgcccgga catgctctca gaccttgctt cctggccatg agctttaagg aatggtctct
                                                                      360
  gaaaatgcac tacttttaag agctgggtct gaagcagagc taactggtct gcagggcaat
                                                                       420
  gacaccettg accteggset cattagetee atcetettae etactgaget cacaaccace
                                                                       480
```

| aacatcmtaa tacttgagag aaagctcatt acagcgtatg cggtggcaca tctgtattta | 540 |
|--|------------|
| attactttac gagcactct cagagtaagc cagctttoto tattgetgag ceeesgaaa | 600 |
| | 660 |
| tatatagaga agagagacca taagcctcca atcacactca yyaataaaac ggggoodaa | 720 |
| t-annatang attaggada aaaataatga qaqaaayact aayayacaya aayanaa | 780 |
| the material attractator data and card Ctaddtadta tatteetige cetadegroun | 840 |
| agetteagta aacceaccag ceactecaga gaagaggagg tggtgeattt ceggettgea | 900 |
| taatagccac cagccaccac cggaattcct gcag | 934 |
| taatayccac cageedeede ogganiers 5 | |
| <210> 1465 | |
| <211> 1625 | |
| <211> 1023 <212> DNA | |
| <213> Homo sapiens | |
| V2137 Homo Duparation | |
| <400> 1465 | 60 |
| the manage appointed as a actition of the agettic car gactiguage caageacted | |
| talance de de la contrata del la contrata de la contrata del la contrata de la co | 120 |
| Liberta tettatett tecttatott todttodtto caccaccac coccas | 180 |
| at at a taga and a tag | 240 300 |
| the to again contagant danatha again tottotador y tottage tottage agains | - |
| talbatata tatattttaa fffagaatca gactggcaca ggactcggca cgcacaa | 360 420 |
| shattagtat totattitt cagottagat ttacactagg caacgiggic gadagaa | |
| the same at a transfer and a contractal to the contract to the | 480 |
| the market attended throughout an adjudicall coaycalada cycayout | 540 |
| shows to age case act cot goat attata gaat gottig coally king daddig the | 600 |
| against a a a careful cetecatate accae agay gecadates of the same | 660 |
| antegrates trateatect caretrarge tigitagecy ayaytaatat taageeggg | 720 |
| tattaggaaa teatgtgata agtgagaatt taddadttaa eeggatadta | 780 |
| thit googg cactatecag tagtagagat gacttagaat tilggagatg catelgagad | 840 |
| The same than an anatherage total affect at Ct Ct add a title age of age | 900 |
| The same the state and the sta | 960 |
| metagrana cancetatua atuuggatte tugacayyay tetyaaaaay dedayedays | 1020 |
| managetast actaacttga titgitataa agciitical algacaaagg gaaceesse | 1080 |
| The seatter of the garden target title tagged adagg clacations continued | 1140 |
| | 1200 |
| magatagatt transpagg agratactta totgarado totgaracco codadassa | 1260 |
| The backer to accept the carrier carrier and conductions | 1320 |
| and the transparent and an analysis of the transparent and the tra | 1380 |
| anatatanga annaccata titachahaha atachahada tayocayyyy cygogganyy | 1440 |
| the state of the contraction of | 1500 |
| and the state of t | 1560 |
| ctatcttaaa aaaaaaaaaa aaaaaggaat tcgatatcaa gcttatcgat accgtcgacc | 1620 |
| togag | 1625 |
| Cogus | |
| <210> 1466 | |
| <211> 2128 | |
| <212> DNA | |
| <213> Homo sapiens | |
| | |
| <400> 1466 | 60 |
| gcgccgcgag ggggcgactc ccggggcacc gctggctcct ggcgggagct ctgcgtcttc | 120 |
| aggregate candentet cancantet decognition ender the cancanter the control of the | 180 |
| taggradic agretagiat tiggacccga qqagataatw ctgtgtgiia dattettet | 240 |
| attacattac asacactasc asactgdasa cgdatgaggw gccacigacg cgccaggain | 300 |
| ternagana cttcagatta cgagcggttg acgggaccag ttgtatttca cgtttttaga | 360 |
| attangetca gaatcagttt tcagaatgac atgtgatgcg tggtgcgtgg tggggg | 420 |
| tatatatata tatatataga tataatteat teattitigi ggegleagaa aggetaegee | 480 |
| maggetteta geggettett aatttacatt cacqqcatac aactgdayay yayccattac | 540 |
| the tettet to tagged to tagged acacactgcc ggagegereg gaadgeege | 600 |
| thestatton cototattto totataaaat tottactgta gygaaryyce dageggaeda | 660 |
| tragttrate constitution transfer transf | 000 |
| | |

<400> 1468

| ctgcatcata tgtaggatgt ctggcaaaat agtgtacagc gttcttttct caaatgagag | 720 |
|--|------|
| agtiticance actiticance acarranged adjudadily cladydatica goodaassa- | 780 |
| The transfer transfer and transfer to the transfer transfer to the transfer | 840 |
| | 900 |
| | 960 |
| godga gatetattee agetateaat geagaageea gyaaaggaga gugugugu | 1020 |
| | 1080 |
| gaaagaagmc caattatttt ccttggatgc tgtcccttct tttggaatta ataagatggc | 1140 |
| ttcactcagt gagaggctgt aaagacattt cactggaaac aggcagtaac agtggccagt | 1200 |
| traditional gardystic adaptions and the state of the stat | 1260 |
| catttaactg agacatctga gcctgcgttg cggattctga ttctctaaat actcctgcaa | 1320 |
| gaatccttt aattttcac tgtgcaactc aagaaggacc tttctagggt attgtcagga | 1380 |
| gaatcccttt aatttttede tytycaacte dagaagatgat teatcactcc cttaaaatcc tacgtatgct aatgatattg tcaggttagg tgagaatgat gatcactct ggcgttgcaa | 1440 |
| tacgtatgct aatgatatty traggtragg traggtraga tracttratga tgttaaagct gtactttaag aaagataaaa ctgccactgt ggcgttgcaa | 1500 |
| tttttatga tgttaaaget gtaettaaa tagggttaaa tttgccaae tetatttet | 1560 |
| gtctgagcta gctcaagcaa acaaaggaaa ttgcgttaaa tttgcccaac tctattttct | 1620 |
| catetteata tageaagaet etecaaacag caagtgatet aacetateaa gtattatgea | 1680 |
| atagetgaat tteettgeaa tggtcagttt aaagaactgt taacttagea gaggegaegt | 1740 |
| ctcgtggcca aggcccttag ggtccactcc atggaatcag gaccccttgc tgctgctttg | 1800 |
| ctcgtggcca aggcccttag ggtccacct aggtgttcttt ttttgcatgg aagagtcata cgagtgttca tggaggaaga aaaatcactt ggtgttcttt ttttgcatgg aagagtcata | 1860 |
| cgagtgttca tggaggaaga addutedoos systymaga aagaaggagg tgaggccaga ataactgact tcagatacag agaaagtggg aagagtgag ttgtggaaat gatgcttaga | 1920 |
| ggatttggaa ggctaccaga gagargcagc cgaggcctga ttgtggaaat gatgcttaga | 1980 |
| cttgctttca gcaggagtga tgaagccaga atgagggagg cccagacgcc cgggagaggt | 2040 |
| acaggggata ggtgccatgt ggtttgcacc accgcagcag gctttgggtc ccaaagacgc | 2100 |
| gaatggaaat agaagaaaat gcagttttaa ataadaadaa daadaddagg ddoogaaaa | 2128 |
| caagettate gatacegteg acetegag | |
| <210> 1467 <211> 1309 <212> DNA <213> Homo sapiens | |
| <400> 1467 | 60 |
| attagcatat ccatcatctc agtttttcat ttctttgtgt tgggaatgtt cagtatcctc | 120 |
| The transport of the safet tage to the tage to take the tage the ta | 180 |
| caaaaatatg gaagtettea etagtttgtg tgteateett gegeaggtge catgeteate | 240 |
| the service to the coart than tatatate tected cold you ago accept and the coart of | 300 |
| transport the tactar areastrate calladady yellerged codditions | 360 |
| attatasta acadarcece Eddeldeet georgeous | 420 |
| was gatter cottet coac tratatitit ataggatyca grayaccoa gaagaabas | 480 |
| The same to a constant decoration of the constant constant of the constant of | 540 |
| agettagetg tagaaagggt ctgtgattgt caacctggct gcgtgggagt daagaaggas | 600 |
| The tatatan carrectare acteaded todatective activations gas says | 660 |
| the same to stage of coefficial dadicated coefficial acceptant | 720 |
| The arrange of the care of the arrange of the target and additional transfer of the target of target of the target of ta | 780 |
| | 840 |
| a magazina da trata da da trata da da trata da da trata da trata da trata da da da trata da | 900 |
| | 960 |
| | 1020 |
| the second that aggregating acaded to the course of the co | 1080 |
| the second attraction decaddadic transactions of the second attraction decaddadic transactions of the second attractions of the second attraction decaddadic transactions of the second | 1140 |
| harmanaga agatatataa taaaaataca aaaataaca ayyeetyyta yoyoyo | 1200 |
| | 1260 |
| tttgactga gtgccactgc actccagctg ggcaacagag tgacactcca teteadadaa | 1309 |
| aaaaaaaag gaattcgata tcaagcttat cgataccgtc gacctcgag | 1309 |
| <210> 1468 <211> 1686 <212> DNA <213> Homo sapiens | |

| | | | ~++~+~~~~~ | agtatatgaa | ctctctcctq | 60 |
|------------|---|-------------|--------------|--------------|--|------|
| ccctttgtgg | ccttccacat | caacaagggc | cttgtgaaga | ccaagaataa | agagetgaca | 120 |
| attggagaac | tgtctccaga | geageceage | tttgagccca | ggctcatgaa | ggccaaccat | 180 |
| gatgagttcc | gggagctgcg | ggccacagtg | gagcggatgg | ataatacaac | ctggctcacc | 240 |
| gtcttcttcc | tgctgtacct | getgeacate | ttgctgctgg | atacaatact | gctcagtgca | 300 |
| ctttgggtct | ttgggacgtc | ctttttgccc | ttcctcctct | acctatcaat | cttcagcacc | 360 |
| gttcaggccc | aggctggctg | gctgcagcat | gactttgggc | acctgaagg | aaccccacc | 420 |
| tcaaagtgga | accatctgct | acatcatttt | gtgattggcc | accegaaggg | ccacaaagac | 480 |
| agttggtgga | accacatgca | cttccagcac | catgccaagc | agatectete | tatagaactt | 540 |
| ccagacatca | acatgcatcc | cttcttcttt | gccttgggga | agacccccc | cttcctaatt | 600 |
| gggaaacaga | agaaaaaata | tatgccgtac | aaccaccagc | tttctattt | tattatccag | 660 |
| gggcccccag | ccttgctgcc | tctctacttc | cagtggtata | cataggette | ttcctcactt | 720 |
| | aataaactta | acctagatga | LLacculcua | Cyccoycec | 000000 | 780 |
| | | aaadccttcc | Eddaccitti | Cttcatagec | wgg | 840 |
| anaata | atttatataa | ataacacaaa | tgaaccatat | LCCCatgcac | accgaccacs | 900 |
| | ~~~~~+~~~ | tccacccagc | LECAUGUCAU | acgeaucgee | 0 0 | 960 |
| | ~+~~++aaa+ | adacacctca | acttccauat | Lyaycaccac | | 1020 |
| | | cacaaaaraa | CECCCCCAAC | quagueere | 090900000 | 1080 |
| | ~+~~~~~tcc | aadcccctdc | Lullaucct | Cyccyacaco | | 1140 |
| | | taactagatg | cclattita | CCaacaacaa | 0450000 | 1200 |
| | 22222222 | addaadactc | Ludauccaay | ycayayyya | 90009~955- | 1260 |
| anataggagt | atagtttaat | actcagaggg | ggttgggttt | ggggacacaa | agoodog | 1320 |
| | ~~~++++ | ttctadccac | auttictaaya | CCCaaagegg | 9999-99 | 1380 |
| | + aggagggaa | adagetatta | aaacaaaaac | gladallall | | 1440 |
| 1 . 1 . 1 | . ataaaaataa | ttaaraaca | dauauaacca | ggagggcaac | ~9~~9~~J | 1500 |
| | theneganant | caccaacaca | Ettadeacta | adattccuc | | 1560 |
| | . ~~~~~tataa | teceagetac | ccaudaddci | gaggcaggag | aacc 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 | 1620 |
| | . +~~~~~ttac | agtgaggtga | dateacucca | Ligiacica | 9000999-9 | |
| cadadcaada | ctccatttca | aaaaaaaaa | aaggaattcg | atatcaagct | tatcgatacc | 1680 |
| gtcgac | | | | | | 1686 |
| gccguc | | | | | | |
| <210> 1469 |) | | | | | |
| <211> 2153 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| \Z13> 1101 | J. D. | | | | | |
| <400> 1469 | 9 | | | | | |
| | aaaaaaat | tctttccac | c ccctttattt | : acttatttat | ttctctctct | 60 |
| | +~~~ataac | , adatteta | a rrralutaci | , Lattiugary | , | 120 |
| | ~ atctataaaa | - caccettaa | z actuquitud | , cogococos | , | 180 |
| | ~ | - ++~++ | a ocadadulu | Letigaagee | , 00000 | 240 |
| attattt | t tataataaa | tatacttta | a cattcaagtt | acctttttaa | a agcgtgtggt | 300 |
| attttttta | t tytyytaaat | | | , ctattaatta | caggactccc | 360 |

tcagtaacat ccagtgcagt tgttcctcag tatccacggg ctgttggttc caggactccc 360 acagatacta aaattcacac tcaagtccgt tattttatat aagtgtgaga tcttagataa 420 cctatgcata ctctcccata tactgtaaat aatctctaga tgatttgtaa tacctaacaa 480 atgctgtgta aatagttgtt acactgtatt gttaacagta cagtaacaga cctgtctgtt 540 cagattette etggeetttt aggggateae tgacaaaaaa aettagtgea tgtteagtae 600 agacaaccat cctttttttg ctttcgaata tttttgacct gagattggtt gaatccatgg 660 ctgtggaacc catggacaca gaaggccagt ggtacattta cagtgttaca gagctgtcac 720 ccctgtcgat tccagaattt ttccatcatt ccattagcag ctcctcccca gcctgctctg 780 ctccggaccc cggcagccac tatctgcttc ctgtctctgt ggatttgtct acattagata 840 gttcacagaa atggaatcac aatatgtgag cttttgtgtc tggcttcttt cacttagcgt 900 gctgttttca aagtccatcc gtgctgcacc atacatgagc gctttattcc atccatgctg 960 taccatacat gagcgcttta ttccatccat gctgtgccat acatcagcgc tttattccat 1020 ccatgctgtg ccatacatca gcgctttatt ccatccatgc tgtaccatac atgagcgctt 1080 tattccatcc gtgctgcacc atacatcagt gctttattcc ttttctggct gaataacatc 1140 acattgtatc gataggtcac atctggtttc tccattcacc aaacattggg catttgggtt 1200 atttccacct tttggccgct gtgaataatg ctgctatgaa catgggtgta caagttttag 1260 tttgaacacc tgcggtcact tattttgggg tatatacctg ggagtggaac tgctgggtca 1320 tgcagtaact tgaagtttaa gttactgagg aattgccgga ctgtttccca cagtggctgc 1380 agcagetttt attecagtta geaateaega gagetteeca eetteteaee tacaeetgtg 1440 atctgcctct ttcgttgtag ccatccctgt ccatatgagc tggtctctca tcttgccgtg 1500

```
atttgcattt ccctgatgac tgttgatgtt gagcatcttt tcatgtcctg attgaccatt
                                                                  1560
tgcgtatctt ctttggagaa atgtctgttc acgtgctttg cctagttttt aaccgggctg
                                                                  1620
tttatctttt gttattaagc tataagagct ctttatattc caaatgctag acccttaaca
                                                                  1680
gatctgtgat ttgcaagtat tttctcccat tctgtgggct atctttttac tttcttgata
                                                                  1740
gtgtgcttct acaaaagttt ttaattatgg taaaatcaca tttattttct cttttgtaac
                                                                  1800
ttttggtgtc atgtctgaga aaccattgcc aaatcaagat cacaaaaaat tgacgaggcc
                                                                  1860
aggtgcagtg cctcacacct gtaatctcag aactttggga agccaaagat cacttgagcc
                                                                  1920
caggagttag gaacagccta gacgacatgg taaagccccg tctctacaaa aaatagacag
                                                                  1980
attagccgca tgtcgtggtg tctgcctaca gacccagcca ctcaggaggt tgaggtggca
                                                                  2040
ggattgcctg agtctgggag gttaaggctg cagtgagctg tgatggagcc gctgtactcc
                                                                  2100
atcctgggca acagagtgag atccgagacc gtgtctcaaa aaaaaaaaa aaa
                                                                  2153
<210> 1470
<211> 1790
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (99)
<223> n equals a,t,g, or c
<400> 1470
caaaaaatac aaaatagcac cacagtctcc atctggttta tagcaacara ggtactttat
                                                                    60
ttaatgaagc aatggttcta atcctggata ctgccatgna ctacaattcc atccctccca
                                                                   120
180
gtatagggcc cagggtggct ccctactcct caggctcaaa aggatgctca gtgggaacag
                                                                    240
atgatetett gatgagtget tetteagttt catagtttgg aategtteae tgtgtgettt
                                                                    300
 ttggggggtt ttcaatggaa attcacgttg ctttgcattt ctgtgtccgt ctttggtcag
                                                                    360
 ttgtgcaagc ctgctcactg tcatgtgaag atggcctttc atctggcttc tctctcttaa
                                                                    420
 gtgagaaaga ttgtccttca ggggacatga catcaatagg tttctggaat gagggactct
                                                                    480
 540
 aaaaatggat tcaactgttt ttgcagaatg tagaaagtat tctgtgtcct tggttaaaga
                                                                    600
 aatccacttg tgaagtgtgc ctggaaaatg aaagtttgtg ttttttaaag aggaatattt
                                                                    660
 gaaactgctt tctatgcatg cttagctgga gaaaagtaca ggcaggcgtc ccatctccca
                                                                    720
 gccacttctc aaaggtgctg ctgtgtttta aagaccaggt acagccaggg cagtatttgc
                                                                    780
 aaggacattc ctgcttactt tatccctttg gttggaaagc tctagatgat tcccgcagct
                                                                    840
 cetecagace ecgeetecet geetteeca getggtetgg gaagaggtgg tetgetgace
                                                                    900
 tgtggtatct cagaggggac gttcctcctc ctccctgtgc accaggtggg ctgcaccctc
                                                                    960
 ctgcctattc aggatgtgga tgccacagga gagcagcagg cagtggaaac ttcagttgca
                                                                   1020
 ctggttctcc tggtggcaaa ggcatgaagc acaggggtcg attaatccag gctactagaa
                                                                   1080
 agctccagag caaagtgtgc gggtcccaca aatgcttggc tggtggggtc tggatcagtg
                                                                   1140
 ctgagataga gttggcagaa gaagcagagg cactctgctt gctttcctag ccagtcctcc
                                                                   1200
 cctacacaca cacacacaca cacaacacaca gtgcgccatt ctgtgcaatc
                                                                   1260
 ccagtgacca aatcccttcc ttgcccacct ctatgtcagc aggactgacc acatcactcc
                                                                   1320
 cccgagttcc caccaccagc atttcctcca acctttttcc atcacaacca gttagaaccc
                                                                   1380
 tacaggcaac aaggccttct agaatccgct taacccttgg ctgataacag gcaaatttca
                                                                   1440
 gtctgctaca ctttgttagg tccagaagga gctgcccata ctactttctt atgagcatgc
                                                                   1500
 tcagtatggc atatggacat gtaatgtcac atctttgtgg agtgtgattt tctttttya
                                                                   1560
 catatttgta tgcagtagag agcctgttgt agaaaacgct ccctgtatct tgctgtactg
                                                                   1620
 ttaaagaaag ctgaattcca cattgccaac aaaagcgtga aaatgttcat gaaccttcct
                                                                   1680
 ccaggaaaag ccattcaagc ctgattattt ttctaagtaa cttcaattaa attgaagaaa
                                                                    1740
 aaagaaaaaa aggaattcga tatcaagctt atcgataccg tcgacctcga
                                                                    1790
  <210> 1471
  <211> 1319
  <212> DNA
  <213> Homo sapiens
  <400> 1471
  aattoctaat tittaatatg gigacottac agaaaatatt toccaaacat cottitoato
                                                                      60
```

| ctgtgcttct ggaggactga tttgtttgag ggaatcattc tatgcattat atcctaaaat | 120 |
|--|------------|
| attetatgae tggtttetgt ceatgtttgt gggettteat ttttttaatg ggatgaetat | 180 |
| tagtcaaagt cagcttgtca tgactcatca taggctttct aacctacttc cctgaatccg | 240 |
| ggtcctcatt gtgaaatgca tgccatacga aatttgaacg tagctttgga aaaagggact | 300 |
| attigtiggag taatggcatt aatcaacata gaacatctta titigaatcaa cagttaactt | 360 |
| cagtagtcat gtgaataaaa ttcttattgt ctaaattgag acagcctcag atatttgcag | 420 |
| atatttactt tttgtctgat atcagtacat atttggacaa agtcatctaa ataatagttt | 480 |
| gtcaccaaat aactacaaaa tctcatttta aatgagtaag gagaacgtgt acagaagcaa | 540 |
| attttcttca aaatagttgt gggaagagct tatatgtgaa agcttatgac tggttttgag | 600 |
| ggagaactta ctggagaaaa tggactctat gttaagtatg gttttcagat agaattcttt | 660 |
| cctttttaa tgagaaaaa aaatccacat taatattgaa actgcacctg taatcccagc | 720 |
| actttgggag gctgaggaca gaggattgct tgagcccagg agttcgagag cagcctgggc | 780 |
| agcaaagtga gaccccatct cctaaaaatt taaatgtatt tattaaaact gttctctaga | 840 |
| agatttagac tgaatcccaa aagtgtttat aagttcaaaa gccaaaagta ttigtaatti | 900 |
| caacaaccaa aaatggattt ctttatgtaa tcttggaatt attaaaagtc cttttagctt | 960 |
| gtaggagata tttgtagaaa gagtttaagg actggtggct ggtttggtti gillilaaa | 1020 |
| antatttact dacdaddccd ddcdtddtgd ctcacccctg caatcccagc actilygyay | 1080 |
| gccgaggcag gcagatcaca aggtcaggag ttcaagatca gcctggccag tatggtgaaa | 1140 |
| contactor actagagata gagagattag coatgogaag tagcaggtgo ctgtagttoc | 1200 |
| agctactcgg gaggctgagg cgggagaatt gcttgaatcc aggaggcaga ggttgcagtg | 1260 |
| agccaagata gcgcctctgt actccagcct gggtgacaga gcgagactct gtatcaaaa | 1319 |
| agccaagaca gegeocogo accoss to occur | |
| <210> 1472 | |
| <211> 1504 | |
| <212> DNA | |
| <213> Homo sapiens | |
| (213) None Department | |
| <400> 1472 | |
| totagtttog titttaaaca tittgaggata tittaggiga titaaticat igiagaacai | 60 |
| agactagata attroactto tittagatto agaitgitti giageceagg adalytica | 120 |
| tattagtaa tattagatat gtacttgaga agaatgtgta ttatattgtt ggttgtagtg | 180 |
| thoughtage of captited cicatiogia giggggcota aatcatotgt accordacty | 240 |
| attactata attactatata tttatttttc tttgtcccat ctgctttttg ggilciliga | 300 |
| the tattata at attactic tictagatta atcaaggatt trataatatt cagattiate | 360 |
| tagtatatta gagtittaga tataccicti tattititaa gaggatgiic tagggattac | 420 |
| agaatagatt ctcaatttat cataaaatag caagaatatt ataccacctt acatgittea | 480 |
| catgrantan ancatacttt catatactat tttcatcctt tgtgctttta ttgtcatady | 540 600 |
| the grant and analytic taget attack attacking the territory and the control of th | 660 |
| attatttaa gaaactaaga aatgagaaaa attaacatct acctgtatat tcaacatcta | 720 |
| gototatatatt taccattttt gccattcttt attcctacat aaagatcaaa gillacatel | 780 |
| catatattt taccattt tacattt tac | 840 |
| tagtgacaaa ttcttcagct tctgttttca gcttttatct gaagatacct ttattaatct | 900 |
| thought the distance of the state of the sta | 960 |
| atccatggcc gatcataacc cactgcagcc tcaaactcct gggctcaagt gatcctccca | 1020 |
| cctcagcctc ccaagtaggt gggactatag gcacacgcta ccgtgcctgg ctaatttttt | 1080 |
| aattttttg gagagttggg gtctcacttt gttgcctggg ctggtctcgt acccagggct | 1140 |
| caagcateet ectaceecag ecteetaegg teetgagatt acaggtgtga gecaceatge | 1200 |
| ctggttattt aaaaaaatat gttttgaata atacagccaa ttctgttttt ttaagctgtc | 1260 |
| actatgttct gtatagccac caaaaacagg gaattagcaa atactgaatc attgttctta | 1320 |
| ggggaaatac agacttggct cctgtaagcc tcttgtcata atatttttgt taaccaatca | 1380 |
| gtatattacc ttgttttatg tgttttcta tttaaagcca cctggggtac aaaaatacag | 1440 |
| ttggatagaa ggaataagtt ctagtatttg atagtacagt agagaaatta tagttaatga | 1500 |
| tttattctat atttcagaat agctagaaga attgtaatgt ttctaacaca aaaaaaaaaa | 1504 |
| aaaa | 1301 |
| | |
| <210> 1473 | |
| <211> 1645 | |
| <212> DNA | |
| <213> Homo sapiens | |
| <400> 1473 | |
| ✓#00\/> T#\/> | |

| attecttact gtgaatagtt gettteatae tacageagea atgttgaaga gttgtgacaa | 60 |
|---|------------|
| tgaccacatg gcctataagg cctggaatat ttgctgtctg gctctacgca gtttaagtti | 120 |
| gotgaccct gtgcaaactt cgtcaaaggt aactttgact tactgcgtac tcttgattag | 180 |
| tagggaagt ctctaaagtt agatattaac ttagaaaaaa ttgataagtt tcaaaaaaaa | 240 |
| attrotottt ggtaggaag gtaactccaa gagttaacgg ttttcttgcc ttgaagggcg | 300 |
| tratecaget tigitatetat etetgeagie tiattiecea tigaceagie tittiecae | 360 |
| tractorate tetragette teateteete ettigageea eccattetea tietgeagge | 420 |
| control ta atgaattaaa taaatottag acacacgoto actatatat ccaatgagag | 480 |
| tatttattat atggagaatt atatgttgtc tccttgaggc ttggcagtgc ctcttgaatg | 540 600 |
| tagtcattta accetettgg geeteaggta acttetetgt taagtggaaa taattateee | 660 |
| cagtacetta gecaaattae tgteteacee aaataataat tggacatagt tttgtaattt | 720 |
| aagttaaaag atgttatgtt tatgaaagag ttttgttagc tgcaaagcgc tatttgttgg | 780 |
| atattgcttc ttgaaaaaat acagatctta ggtattaaag aataggtaga agcctgttag | 840 |
| gtatgaatta tgaacagata ttcgattctt tgacttctcc attcagaata gttattttta | 900 |
| aaaagcaaat atgtaaagat ctttctgctc ttaagcctaa ccactcatct gatgagtgta | 960 |
| ctgaaaatag aagtggttta ttgcaatatg tcagagaagt attctactga taaccaccca | 1020 |
| tacatgaaat cttaaagaag tagttatgag ttggaaattt ctaggttgta atcagaagag | 1080 |
| ggagcaaatg acagaataca gctgtgcatt gtttggaagt gggctggaaa gaattcattg | 1140 |
| cctctttaat tgaagaaaag caaagagtga cactaatcaa agtaaaagaa gggaagtact | 1200 |
| catagctgaa aatggaacta taaattgttt gctttttaga gcaacatcag ttctttgaaa cccatacagt tccttataat attccaaaac aaactgccat atggaaacct gtttagaaag | 1260 |
| gaataatagc actotaccot cotocccago cactaaattg aaacatacgt gaaaatttaa | 1320 |
| tgtagttttt taatcaagct cagaaaattt ttttttttt tgagacggag cctcgctctg | 1380 |
| togcocagge toggagtgeag toggegegate teageteact geaageteeg ceteeeggtt | 1440 |
| tcatgccatt ctcttgcctc agcctcccga gtagctggga ctacagcttg gctagttttt | 1500 |
| ttgtattttt ggtaaagaca gggttccacc gtgttagcca ggatggtctc aatctctcct | 1560 |
| gacetegtga teegeecace ttggeeteec aaagtgetgg gattaceage gtgageeace | 1620 |
| gcgcccagcc caaaaaaaaa aaaaa | 1645 |
| gegeecagee eaaaaaaa aaaaaa | |
| <210> 1474 | |
| <211> 1466 | |
| <212> DNA | |
| <213> Homo sapiens | |
| | |
| <400> 1474 | C 0 |
| caaacacatt totoactitt tittootga agtatataag totgigaata accatggigg | 60 |
| taaaaacaga aaggagaaac agaacgagaa agaaagaa | 120 180 |
| gtaatattat caagctatgt cttttgatta aaatgtatta tatggtttac cttgattaaa | 240 |
| atgcattatg tgtgcagttt tctcaaaaaa attcttattg tgtttwattg ttcagtccct | 300 |
| tgtttattct carctgtgtg tccagttact ctatccatct tagactataa actcatcaag | 360 |
| gcattaamca tgttgttttc tttattcctg aatctcaaca tctagttaat gccaggcagg | 420 |
| ctgtgacagt caataaatgt ttgctaatta tgtgatgatg ctttgggaca taagaatgtt | 480 |
| gctttgtgtc tctagggttt tagtttattt ttaccagatc aaactttaga attcgactaa | 540 |
| cactaatgtc agaagtctgt gtttcagtaa ccatctacag ataatggcac ccagttgtcc | 600 |
| atgaggagat gccatttgca tcctgtgtgg gtgacagcta tgctttgatt cctcttggat | 660 |
| ctgtaggact acttgcctgt aagacctcat gtattgttct gggggtctgc cagaaggga agctagcctc agaacacggg gaaatgaggc aagggggctt cagaagtggt catgtcagga | 720 |
| ttctggcttg gcaaagagaa aggcgtgggt tgttttatgt tccaaagctg gagttatttc | 780 |
| ttctggcttg gcadagagad aggcgtgggt tgctttdtg tooddagoos sagtt ttctgtgacc ctggcatgtc ttcatactta acagacacca atattgtcct ttccttggtt | 840 |
| tagccaaaac cgggggttag ggtgggtagt aggaggtgaa ggagctttc ttcagtatgt | 900 |
| atgaaggga ttgacgtaat atctgctttc ataaactgaa tctccagtga gccttccttt | 960 |
| atgaagggga ttgacgtaat atctgettte dtdadesgaa societag s aaaaaataat tgtatgtaaa aaccacataa tgattckgta attacagtgt gttggcacag | 1020 |
| ttgttaaatt ataaatttaa taagctaaga tgagctcagt aagagtatag gcttttcact | 1080 |
| ggagtgaaag gacattactt gatgagatac agcagagagg aaacaataga ctttttgtgt | 1140 |
| agetgeetga aacttetget aggtgaagge aagecaataa atgaagaaga agggataatg | 1200 |
| gattgcctaa cctgtgaact tggtcaccat gttctttgaa aacaaagtga aatgcaatgt | 1260 |
| grigiciting gactototoa cagtocttac cotacatoag acaaccotto totagtatit | 1320 |
| cacquattit gattigctat ttattitigca titigcettea titigcetati tittaageea | 1380 |
| tgaaatgaat tatttattct gtttatacaa gcaaaaaaaa aaaaaaggaa ttcgatatca | 1440 |
| | |
| agcttatcga taccgtcgac ctcgag | 1466 |

```
<210> 1475
<211> 1828
<212> DNA
<213> Homo sapiens
<400> 1475
catcagtgtt taaaaaaaaa aatcaaccag gttgtggtaa caaggcattc tatttcttca
                                                                       60
aaaagactgt atgcctgtgt ctgaggaact tacctattat ccacctctgt tggaactctc
                                                                      120
ttttaaaaag tacatttata gattgatcag aattataacc atggagaatt ttttcttctg
                                                                      180
agcattttaa tatacttgaa aacaacattg acttgaaaaa tttcagaaca tttttcagta
                                                                      240
cctagtttta ttaaatatta cacttgagag acacttttta aaaatgtgtt aatgtcaata
                                                                      300
tgatgagatt ttagcctttc tccagaacta aggcattaaa gaaaatagca aatattaaaa
                                                                      360
aataaaactg ttactttttt ccttctttct tttcaccttt aggttaatat ccagtattat
                                                                      420
gtgttatccc tttggataag tatgctttat tttacctctg ttaaaaatta aaataaatga
                                                                      480
ttctattcat atttgtcagt aattcaaaac ttatatgtgt aactgaacgc gcatgtaagg
                                                                      540
tatggtttta tttattttt ttttttttg aggaaattta aatgctaaag aaacaacgaa
                                                                       600
atgaaaaggt atcaggaaaa aaagatcagg aagttgtatt caggtacaaa tctttttta
                                                                       660
aataagtatt ttgttgaggt tgaagaattg ctggcaatta aaagaataga gctaattatg
                                                                       720
gctttcatca ttcattcatg tatttattga gcacctactt attatggtgc tcaacacttg
                                                                       780
ttactgcaag ctaccttaat ttcccaagag tggtgcctta ctctgttttt tctgatatgg
                                                                       840
tcttccaatc agtgtgtgta acatacctgt tgtttatcag ccattgtagg tggctgtgtc
                                                                       900
tgttgcatca tcataagaag tttaagcttt gtgctctgat aaattgtgtt ctgttaaaga
                                                                       960
ggttagtagg atgaaaacag caaaacaata atttttcaa caaattgtaa attataagaa
                                                                     1020
aaagagttgg tttgtgtaca acaattttaa tgattccctt gttcattttt gctgtgaaat
                                                                     1080
gcactgaaaa aaatcctcaa aatgagttat agttccctgt gttgggaaaa ttgacaaata
                                                                      1140
ataaaactag agaacaaaca ataatgcttc tgtctctttt acgaatggag agagaaagtt
                                                                      1200
tatattcagt agagttattg ccctgttcat ttgagagggg catggatttt ctgtttaagt
                                                                      1260
ccttcaggga atcttcagct aggtggtaaa tttaataaga gtttctaaaa attgaaatgt
                                                                      1320
ttaactttta aatattctgg agatagaaga agaatataaa atgaaaccag gctgatctgc
                                                                      1380
atgcagtggc atttacaact aactgatcac aaccaattat agattcctta ttttgtttat
                                                                      1440
 tgtgaggcag agtctgactc tgtcacccag gatggagtac agtgcatagc tcactgcagt
                                                                      1500
 cttgacctcc caggctaaac caatcattcc acttcaccct cccaagtagc tgagaccaca
                                                                      1560
 ggcacacaac accacaacca gctgattgtt gtactgtttg tatagactgg atctcactat
                                                                      1620
 gttgcccaga ctggtcttga attcctgagc tcaagcagtc ctcccacctc agcctcccaa
                                                                      1680
 agtactggga ttacaggcgt gaggtacctc gcccagcccc agttacagat ttctttgttc
                                                                      1740
 cttctctctc ccactgctta acttgattag cctttaaaaa aaaaaaaaa aaaaggaatt
                                                                      1800
                                                                      1828
 cgatatcaag cttatcgata ccgtcgac
 <210> 1476
 <211> 2746
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> SITE
 <222> (2)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (10)
 <223> n equals a,t,g, or c
  <220>
  <221> SITE
  <222> (26)
  <223> n equals a,t,g, or c
  <220>
  <221> SITE
  <222> (35)
```

<223> n equals a,t,g, or c <220> <221> SITE <222> (2736) <223> n equals a,t,g, or c <400> 1476 cnccgatgtn ggaccaatcc ccctantagc cgcanactag atctctggaa tttcctcgat 60 attccaagaa gccgcctggt aaaataccct ctgcttctcc gagaaatctt gaggcacaca 120 ccaaatgata atccagatca gcagcacttg gaagaagcta taaatatcat tcagggaatt 180 gtggcagaaa tcaacaccaa gactggtgaa tctgaatgcc gctattataa agagcggctt 240 ctttacttgg aagaaggcca gaaagactcc ctgatcgaca gctctcgagt cttgtgttgt 300 catggtgaac tgaagaacaa tcggggcgtg aaactgcatg ttttcctstt ccaagaagtg 360 cttgtgatca ctcgagccgt cacccacaat gagcagcttt gctaccagct gtaccgtcag 420 ccaatccccg tgaaagacct cctgctggaa gacctccagg atggagaagt gaggctgggt 480 ggctccctgc gaggggcatt cagcaacaat gagagaatta aaaacttctt cagagtcagt 540 ttcaaaaayg gatcccaaag tcagacccac tcgctacaag ccaatgacac tttcaacaaa 600 cagcagtggc ttaactgtat tcgtcaagcc aaagaaacag ttttgtgtgc tgccgggcaa 660 gctggggtgc ttgactccga gggatcgttc ctaaatccca ccaccgggag cagagagcta 720 cagggagaaa caaaacttga gcagatggac caatcggaca gtgagtcaga ctgtagtatg 780 gacacgagtg aggtcagcct cgactgtgag cgcatggaac agacagactc ttcctgtggr 840 aacagcaggc ayggtgaaag taacgtctga cagaagcatg tgcacttcgg gaagcaggcc 900 tgcatcttac ctgtacagta tttgcattcc acagatggar cggtttggag aagcactttt 960 tcatactttt gtgaaagtat acatgttggc ccagtctctc gtatctgtac ctttgtccct 1020 agtactgtaa ctgccaatct gtctgtgtaa gctggaatct gtggcaacta ttaccctgtg 1080 ttgtatttcc caagtgtctg gatggatgga gaggtactca aacaagttac tttcagttgt 1140 cctgctggat tttaaaaaaa tagaaaaaga atctcaaaac tactgtttta catagattgt 1200 ttgaagagtc cttcctcttg tgcttctgta ccactttccc agctcttaga tgtggtagct 1260 aaaggcacgg aatttagacg gccttgtaaa tagggcatga ggaactcatc tgtgtattgg 1320 gatggtatta gagagagaat caggaaagac caactcatga agtgaacttg gtttgatctt 1380 actcaactag aaagcttgaa aacatccctg gggattctga aggcttaatt ttgcaaagga 1440 ggatgcattg tctgaacttt gcaacttcat ccagtgcaag tttgatgcaa gaatgtatta 1500 ggacataaaa tagaggctga ccttaaaagg gccaggacag aagcggctgc cagctctgaa 1560 tetttaactg aaatgcacat ggcaccagga ggtgtetete atagttggtt getageetaa 1620 aacatcagaa tagaacccaa agggcttagg aaggcctgcc aggataacaa gaaggccctg 1680 tattcattgt gtttcatctg cctaggccta ctcattattt tagagaatga atgaagcaac 1740 aaggaagaga gaccatgact ctatcgatga cactgtttat agaaacacag gagaggaaga 1800 atttggaatg aaaagcactt cgtcagaacc ttctgtggga gccattgaga gaaaagcatg 1860 1920 cartttgcca tctctggttc tgtgctataa tcagaattgt aattatgttc tccagaggcc 1980 aatttcatta actctgatta attagaatca gctagccaga ttagtaacct ctttgtccag 2040 ccttgattta cagtgcaggg taaagtgcag accttaaaaa cagctaagta cctagaagag 2100 ctccctgcaa gtgtaaatat taaggatgac ctgtgcaaaa ttatacccac accagcacta 2160 gtggtaatta ttctaaatta ttgccaaaaa gtttttttta atctgtcttt caagtttaca 2220 gaaaagaaag cagtaaatgc attgatgtca ttttattatg tacatatatc atgtgcattc 2280 aagctgtgtg acaagatata tcaatataaa aacaaggtat atactttatt attttttgaa 2340 aacaaggata ttgtgatcaa ttttaccctg taaaacatat ttctgtattt ataggtctta 2400 aacatgatga attttttcta ttacaagttt atttaaaact gctttctcaa gtcgttattg 2460 atacagcaag tgaacctgct gcagacagaa gcagaggaaa gccaagaaca gcctttattg 2520 gtgaagaaaa gaatgaatga ttctttgtag gcgccatcag ccacttttag aagccatcag 2580 ccagtgtgtt gggaaaagag gtttgtcaag tgttggccta tgggaaggtg gtcaatgaat 2640 gttttgatga aatgaatgtt tttgtataat ggccttaaac ttttctggaa gtatttcaaa 2700 2746 taaattacat tattaagtca tccaaaaaaa aaaaanaaaa actcga <210> 1477 <211> 1507 <212> DNA <213> Homo sapiens <400> 1477

| aaastatta | agettteeea | aggagaagaa | gacttgatag | aagacttgaa | attagcaaaa | 60 |
|------------|------------|------------|------------|------------|------------|------|
| cegatetetg | atraccccat | gctgaaactc | tccataatga | cagaacaaga | gttgaatcaa | 120 |
| aaggeetate | acgaccccac | tctaattcct | ctacatgaag | agctccttag | tcagcttcga | 180 |
| atttttggaa | cactygatte | ctcgactgaa | catgttggtc | ccatcctcqt | gggctggctc | 240 |
| gatgttagga | agectgatgg | tagctactgc | accaatcaac | tagccgccaa | agctctgctg | 300 |
| ccttgcctca | geteetatga | ccgagtccag | getttcctac | agcgatgttt | agaatccccc | 360 |
| gaccacaaaa | agcaagatca | etgagtttag | ctccatattc | caagaagccg | cctggtaaaa | 420 |
| tttagccgca | aactagatet | ctggaatttc | cccgacacce | atgataatcc | agatcagcag | 480 |
| taccctctgc | ttctccgaga | aatcttgagg | cacacaccaa | cacaaatcaa | caccaagact | 540 |
| cacttggaag | aagctataaa | tatcattcag | ggaattgtgg | agttggagg | addccadaaa | 600 |
| ggtgaatctg | aatgccgcta | ttataaagag | eggettett | acceggaaga | gaccastcgg | 660 |
| gactccctga | tcgacagctc | tcgagtcttg | tgttgtcatg | tratcactor | accotcacc | 720 |
| ggcgtgaaac | tgcatgtttt | cctcttccaa | gaagtgettg | tagacatasa | agecgtcata | 780 |
| cacaatgagc | agctttgcta | ccagctgtac | cgtcagccaa | ceeegryaa | agacttcacc | 840 |
| ctggaagacc | tccaggatgg | agaagtgagg | ctgggtggct | ccctycyayy | ggcattcage | 900 |
| aacaatgaga | gaattaaaaa | cttcttcaga | gtcagtttca | aaaacggatc | ccaaagtcag | 960 |
| acccactcgc | tacaagccaa | tgacactttc | aacaaacagc | agtggcttaa | ctgtattcgt | 1020 |
| caagccaaag | aaacagttct | gtgtgctgcc | gggcaagctg | gggtgcttga | | 1080 |
| tcgttcctaa | atcccaccac | cgggagcaga | aagctacagg | gagaaacaaa | actigageag | 1140 |
| atggaccaat | cggacagtga | gtcagactgt | agtatggaca | cgagtgaggt | cageetegae | 1200 |
| tataaacaca | tggaacagac | agactcttcc | tgtgggaaca | gcaggcatgg | Lyadaytaac | 1260 |
| atctaacaaa | agcatgtgca | cttcgggaag | caggcctgca | tettacetgt | acagtattig | 1320 |
| cattccacad | atggaggggt | ttggagaagc | actttttcat | acttttgtga | aagtatatat | 1320 |
| attaacccaa | tetetegtat | ctgtaccttt | gtccctagta | ctgtaactgc | caatetgtet | |
| atataaacta | gaatctgtgg | caactattac | cctgtgttgt | atttcccaag | tgtctggatg | 1440 |
| gatggagagg | tactcaaaca | agttactttc | agttgtcctg | ctggatttta | aaaaaaaaa | 1500 |
| aaaaaaa | | | | | | 1507 |
| | | | | | | |
| <210> 1478 | 1 | | | | | |
| <211> 1597 | • | | | | | |

<210> 1478 <211> 1597 <212> DNA

<213> Homo sapiens

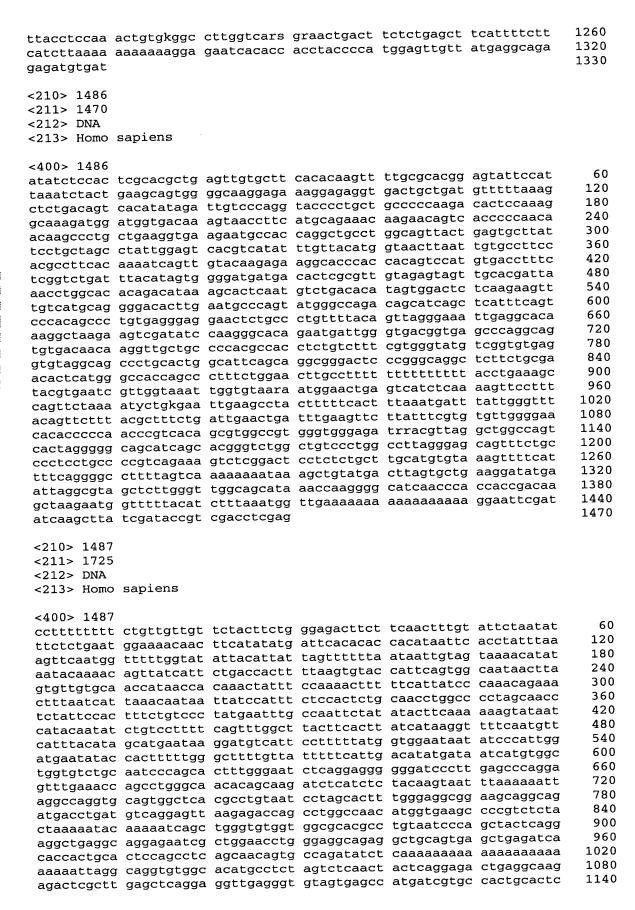
<400> 1478 60 aaaaaaaaa caagtgaaat tgagaccaca tatttagata tagggcatta gaagatccct gaagettaag eeteattage tteatggeaa atetteeett gatettgata atgetggtgg 120 tagggatgat gggggtgact attaacacat tgagcactca tgtgcagaca ttgttccaag 180 cagtttttat atattaatcc tcgaaacaac ccaaggcacg gtagcagagg tacagagaag 240 tcacacccaa ggtcacacag tgggaagcag agtttttagg agagggaaga agggcagtat 300 ggaaaagaat actaaactga gagcagaggc cttcatgaat gtcagcttca ccacccatct 360 gtggggaacc tggggggaaa atcacgtacc tttttgcatg tacgtccttg acttcacctg 420 tgaaaaagga atattgatgc atgtcatgaa tccttgactc tgttgttctg aagktkagag 480 aatgtgtaaa agtgctttgt gaaggtaaar tgcttagaaa cgtagttata ttacacagct 540 600 ttctcttcca cttcaatact taaawttcag gcttaaaaat tcatttagtt ttgcttttca tttcacttct aatgtgtcta atttatttct tggacatgat ttttgttctc aggttacttg 660 tetgeaagae ttttttggtg atgacgatgt ttttattgca tgtggaccag aaaaattteg 720 ttatgcccaa gatgactttg tcctggatca tagtggtaag gcaattcttc agctaattca 780 tttttccatc tttgtaaccc ctgaaatgaa ggcttgggat ttagccactc agttggtgca 840 tgttaagaag tctgacatgt tgaggaaaga tagcattggc agtacaattt ttgaaccaat 900 gaaaataaag aataacatga aagcatttgc ctacttataa aaaaaaaaa aaaacgtcct 960 tctcagcctg ccctcgacaa cagtgaccaa cagacaggca gctgggtttc ccaggccatc 1020 cctctgttgc catcagcttg attggcttcc ccgagggcca gcagggctgg gggctccggr 1080 gacagcagga agcactecca gecaccagtg cetgtereet ettteeeett tgeecetget 1140 1200 tcatcccagc tctgtgtgtg gaggacaaag cttcttcctg cgtggctcca ggaaaagatg 1260 tggctcacgt aggtggcacc tgccaatagc tttgtcaatc acagccccat aggaacgtct 1320 ggaattgctt gggagttggg gagaactgtc aagaagagtg aagagagtgc caaagcggag atctgttcac ctgggggcca tggagggggg acccactaaa gatcaagatc aaagattctc 1380 cccatctcac agacaaggaa actgaggcca gagggaggag agaattgctc atggctccag 1440 1500 aactggtggc aagtttctct ggactcttag gtttattttt aatatgaaat ataaaaacag 1560 tttcaaatat cttattgagg gagaagtaaa aacttattta aacaaaaaaa aaaaaaagga 1597 attcgatatc aagcttatcg ataccgtcga cctcgag

```
<210> 1479
<211> 1294
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (668)
<223> n equals a,t,g, or c
<400> 1479
catcttgtag tagcaatttc atatctctac ttatagttgg gacaattaag gctcagaaaa
                                                                      60
atggcaaagc tgagattaaa attcaggatt ttctgatttc tagccaatgt catgctcatt
                                                                     120
ttctgtgtta attttatggc tcagggtcca gttaaaaacg tctgaaggga gtggtaagta
                                                                     180
caagagagat gggagttggg ggtggggctt gaaggagagc acacctggcc ccaggtgaca
                                                                     240
agactgggct ccagccctgc ctcatcacag ttggacatga tggccctggg tcatttgact
                                                                     300
tttgaggacc tcaggaaaat gagggagctt aaaaaattct atggttccta atgaaatact
                                                                     360
tagggatgaa attacagttc tgggatttgc ttgaagacac aatcagccat ggtttgtcac
                                                                     420
tgttgatgct gagtaatgga tatttggtgt tctattgtga gtctttggta catgtttgga
                                                                     480
attttccatg aaaaaacctt ctgcttctaa aatgcacacc ttgattcttc ccatcgccct
                                                                     540
cctactggct ggtcctgtgc agctcactca tttctcagga acagcagcag actcactact
                                                                     600
ctgarggaaa gaaagcccyt tgctttggtc tgtcctwatg taccatatta ttagagactt
                                                                     660
tecgacance tececatttt twattyetta acagetaata egatagetgt gettyeataa
                                                                     720
taaattcaaa gctgctctct atttctcacc agtttgaatt gtagaaaaga gtacaaaaga
                                                                     780
ttagagtact ttaaaataaa tctcagctaa ttatacatac aactgcattc actaaatgtg
                                                                     840
aatattttca ggctttcttt gctaccaagt gccacctgct catgatttaa atgggcacaa
                                                                     900
atttagttcc attaaacaaa atgcagcaac tcttctccta tagcgcaaac tcctttaggt
                                                                     960
cctattttga aactgagaag ctaattccag tgttctcttg ttagctctcg gtccatgtca
                                                                    1020
accaccccac aaggttgttt acttgaatag tttgcagcct tgctttaaaa gttctagtag
                                                                    1080
gcaaataggt ttgttgatga tgaagtggtt tgtgttttat aagagtcctt atggtctaga
                                                                    1140
tggcatttga acttgtggtt ccagtgatta ccaggaccct gaattgaaga atacatgctg
                                                                    1200
1260
                                                                    1294
 cgatatcaag cttatcgata ccgtcgacct cgag
 <210> 1480
 <211> 2284
 <212> DNA
 <213> Homo sapiens
 <400> 1480
 ccgaaaatta tctgaaattc aaatttcagt gtccttaagt aaagttctat tggaacatgg
                                                                       60
 ccacacattt atttatatat cttcttgtgg ctgttttctg ctacagctgc agcgtcttat
                                                                      120
 actaaacaga ctgtaaggcc cataaagcct caaatattta ctttatggga ctcgatggaa
                                                                      180
 actttactga cccctgatct cagtgtttct tttaagcatt gcaaagatag tttgcaaaaa
                                                                      240
 tgctatgaga gctctatgat ggcattagat acctaaatgt tagccagctg aaaaaaattt
                                                                      300
 cctaaagtgg tattaggcct aaaaaaaagt gattctaggg ctacttaaac aagaagtttt
                                                                      360
 tacagcaaga gttacatcct ctactcattt taatgtctag gtaagccaga gctttaaatc
                                                                      420
 ctgtattaat ttacctgtga aaatatttca tattctccct tttgtgccgt gtgtgcgttg
                                                                      480
 gattccccag tgggtgtata gatgaattta taatttatgt ggctggatgg aagcctgggt
                                                                      540
 aaatacaagc ataaacaaca tcaggcaatg ccagtcgata gactgcgatt ccaggatgtg
                                                                      600
 ttctgtccag gcctgccgtt cattccaaag gcttgcattt caaaactgca ggcttggacc
                                                                      660
 tgggactgct ggtaaggtgg atggcagggt tcacatctgg ttgggcttag gaaggtacca
                                                                      720
 ggagagtgca ccttctagta cttgaaatgt ccctccattt tgaggacaca ggagtggcct
                                                                      780
 acctttcatc taacaaagac aagagaattg aaagctgatt gtctttgtct ttgaagggtt
                                                                      840
 tattgcttta cctcttcact tcacctggct ttggcacctc tgtcatttct tcatttactg
                                                                      900
 ttttttctag catactttta acttcttttt gtactttctc tttccaactg ctgtccacat
                                                                      960
                                                                     1020
 gccacctgtg tatagaatcc caagaaaaca taacccacca ttagaatttt agttgctaaa
 ctatataaga actttgagct gtagattaac atcctctacc ttcctttggt gccatttgtt
                                                                     1080
 tacccctttt tccgaacaaa aaacaatacc tgcccctgtt ccaaaggtgt cttactattc
                                                                     1140
 caataaagaa tgcatgcctg ggaataaaaa gaagcttaga ctactgttcc aatggagcta
                                                                     1200
 agtgttcaaa gaaattcctg aattcatttc ctgggggaaa aaatgtggtt agtgacctgg
                                                                     1260
```

```
aaactactaa caacttataa aactcaatac tctgatggcg actctgttcg ctttacccct
                                                                     1320
aagacatctt gaaaggaaag acttttgtca gagttgggct tctaaagttt taataggaaa
                                                                     1380
ttgaggcact ttctgtataa ttcaagccaa agatttttt ttttctgggt ttgaatgatt
                                                                     1440
ggataattgc ctcaattctc tgttccatgt aattgagatc acttgactct tcttagtgct
                                                                     1500
aataaagaga tgttgggatt cacggtttat taaccaaact tttcagtttg tggacctgtc
                                                                     1560
attcaaaact gcaaacaagg ctgatcccat gcaaaataga ctactgcctt tatgctgtac
                                                                     1620
taagaatcag teeetettaa aggatgeatt tataaeettt atgeaatgag gaaattteea
                                                                     1680
ggtagccaat tttctttata gtgctaccag ccttcagcaa gcttaaactc tgccctgcaa
                                                                     1740
gcctgaaacc ctgcttctct aagattctac ataacaggag attaaacatc caaatgtgta
                                                                     1800
taatcgcatt ctggacagta tgaagaagct gtcttggaat attgttaact attagaatac
                                                                     1860
ttaaagtgtg cacatcaccc aatttaggat ttcttggtaa tagtagccta tactttagaa
                                                                     1920
aattaaagag gaggaagggg ccgggcacag cggctcacac ctataatccc agcactttgg
                                                                     1980
gaggccgagg tgggcagatc acttgaggtc aggagtttga gaccagcttg gccaacatgg
                                                                     2040
agaaacgcca tctttactaa aaatacaaca aataattagc caggtgtggt ggcctgtgcc
                                                                     2100
tgtaatccca gctactttgg aggctgaggc agggaatcgc ttgaacctgg gaagcggagg
                                                                     2160
ttgcagtgag ccaagattgc accactgcac tccagctagg gtgacagagt gtgaccctgt
                                                                     2220
ctccaaaaaa aaaaaaaaa aaggaattcg atatcaagct tatcgatacc gtcgacctcg
                                                                     2280
                                                                     2284
<210> 1481
<211> 1395
<212> DNA
<213> Homo sapiens
 <400> 1481
gccttcctga ccctagatgg gctttgtaaa aagagcaagt cgtgtgtgcc agcctgtgca
                                                                        60
gcagtgaggg cacaggcagc accagggtcc cgggtgtgtg ggtgctgccc cagcttgcag
                                                                       120
 tgtggtetee teggtgetgg ecacagetgt gggteecag gaatattgtg etgeaggtet
                                                                       180
 tagacagatt tgggtactac tggttctctg ttcagcgtgg cctggacagt ccacagatgg
                                                                       240
 tagtagacca tggggtgttg agatgcaagg agactctgcc gttctttcac attctgcttt
                                                                       300
 tgctcctgac agcttaggaa agctctcttt gaaactttgg tatgtgtgga cctgagattg
                                                                       360
 aatgtatctg aaaggttgct aatttctcac tgtccttgct tcccaggacg ccaggaaagc
                                                                       420
 atgtgcagat gcaactetet etcaggtaag ageceaetga gtcaegeaga gceatetgee
                                                                       480
 tgtgaggagg ctagcacggc acccacacct ggagcctcgg gagggctctg cttgcattct
                                                                       540
 ctgttgcgca gtgaggatgc caagccactg cttttattaa gaagtcattc tgatggtagg
                                                                       600
 cataggaaat agaggggctt attgagataa aaatgagata tctcaagcct tgaataatca
                                                                       660
 tctacctgtt acagagggta atagttgtaa aatattgtta ttgtcttaag atattttgaa
                                                                       720
 gctcctctcc tcaacagaat ctgcctcaga acttctattt ctaatatcca atttgataat
                                                                       780
 acctcaaaaa gttaaacata gaattattgt atgactcagc agttctgcca ttaaatatat
                                                                       840
 gcccaacagg attgaacact gcttttcaaa cacacacatg tacatagcag caccattcac
                                                                       900
 aatagccaaa atgtagaaac aaccaaaatg tgcataaatg aatgagtgga gaaacaaatt
                                                                       960
 gtggtgtctc tgtgccctgg agtattgtca gccattaaat ggacgtcagt acagtcagag
                                                                      1020
 gctgcaacgt ggataaaccc cataaatatt acgatagtga gagaagccaa acaaatggct
                                                                      1080
 atgtattgtt tagttctatt tatatgaaat atctagaata gtaacattca ctgagacaga
                                                                      1140
 gtggactagt ggccagcagg ggtgttaggg gagagaggga gaggaagtga acagggagtg
                                                                      1200
 actgctgaat caatgtctgg tctccttttg gaagatggtt tggaactaga tggtggcagt
                                                                      1260
 ggttttacaa cgagtgtact aaatgccact gaactgtaga ctttaaagtg attaattgga
                                                                      1320
 tgttacgtga acttcacctt attaaaaaaa aaaaaggaat tcgatatcaa gcttatcgat
                                                                      1380
                                                                      1395
 accgtcgacc tcgag
 <210> 1482
 <211> 1229
 <212> DNA
  <213> Homo sapiens
  <220>
  <221> SITE
  <222> (710)
  <223> n equals a,t,g, or c
  <400> 1482
```

| | atgccaggct | aactctttd | gatttttta | gtagagatgg | ggtttcacca | 60 |
|-------------|--------------------------|--------------|--------------|--------------|--------------|------------|
| aatteettee | ggctggtcta | caacacctga | cctcacqtqa | tccatccqcc | ttggcctccc | 120 |
| cigiligacia | gattacaggc | ataaatcacc | atgtccagcc | cacatacact | tttaaaaata | 180 |
| adaguguugu | ttgataaaat | ctgaattaag | ctattattt | tatgaggatt | gtttctgact | 240 |
| acagettate | atttcccttt | tcacctcccc | tatcagacac | atacactcca | cgtccacacc | 300 |
| eggetete | acactgcgga | cttcaccact | cacattcact | ttactttgtt | aatctggctg | 360 |
| acacacacyc | tcttagccct | tgacacagta | tataaaaaaa | attctattag | cagctcacca | 420 |
| taayyaaacc | aatgtgtgcc | tcaaattgag | agtgccggtt | ggaaataaca | attcactcta | 480 |
| Lygiatica | ttcattgaaa | totaaattoo | cttatacccq | ttttcattct | tgcggacttc | 540 |
| agcagtgctt | gacaggtttt | atottacaao | cattgaagag | aaaatctttc | tcctggtatc | 600 |
| tcaggaggaa | gtatgcaaca | argreacaag | tgattcattt | aggcaactct | ggtctactct | 660 |
| tetttttta | atatctaaca | atatocaota | ttctcaggaa | ttttaccagn | gtgggatcct | 720 |
| aggagettge | ggggagaagg | atacttcaw | atctqqattt | aatttcvgag | ttaataaacc | 780 |
| ggtactttga | tggaatgccc | attattatt | atttccttat | ccatttatga | actaccttaa | 840 |
| gccatcaccc | aaatagtgac | ttaaatataa | aaataaaatt | aatgtccttt | gtttggaatg | 900 |
| ggcatttatc | aaatagtgac | ttaaacctaa | tacaataaat | atagagaaa | tgaaagattc | 960 |
| cttttagaga | ccattaggac atataaaacc | ctaggagcag | actosactor | accaacctaa | ccaaaatgta | 1020 |
| aacaataact | atataaaacc | tataggicec | acceaagegg | attatcatta | ttataacacc | 1080 |
| gctcaaaaca | taatagtggc | tatgagaaaa | tttaaaattt | ttcacctcca | taccacttta | 1140 |
| cagcaaggaa | ctgtataggt | tatagggeet | cccaaaaccc | 22222222 | gaattcgata | 1200 |
| tttttattgt | gactttcaaa | cacgaaaata | Ccattatytt | aaaaaaaaaa | gaaccogaca | 1229 |
| tcaagcttat | cgataccgtc | gacctcgag | | | | |
| | | | | | | |
| <210> 1483 | | | | | | |
| <211> 1166 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1483 | | | | ataaatttta | actetteaaa | 60 |
| cgaagcaatt | tgcttgcaca | tetgaatate | tttttgtgt | cccattecc | gaaagagg | 120 |
| actgaaagca | atttgacttt | tatttttgtt | tttctaaaga | acageragge | ttcatcaaac | 180 |
| taagctgatt | gtcactctgc | ctgcccacta | ectacteece | accatggtgt | trataattaa | 240 |
| atccccacca | cctgaagtga | tettttaat | ccttgtgata | gradarycar | tatttatt | 300 |
| caggaaaaac | atgttttaa | ataatctaca | aatgagaacc | caaatygtag | acacttaatt | 360 |
| gacagaagta | aatcaaatat | tatggtttaa | atataatgca | aaatttcagg | tataattaaa | 420 |
| tgggcttccc | ttaccctaaa | gagggttttt | cttataataa | ggagaayayy | anteceteca | 480 |
| agaaaattaa | gagacaaaac | cttcaggtac | ataatgcatg | aaaatttta | tanageete | 540 |
| aaaattaagt | tctgttataa | taccagccaa | ttctgaatta | gccaatgccc | taaaaycacc | 600 |
| taacaattta | aggttatctt | atgagtccta | tgaaaacaat | tatttgttgc | tadatttyay | 660 |
| ttttagctac | caacgccatg | tttacgtgac | aagaaattgt | tttggccctg | tggtttatga | 720 |
| cgtgctgctg | gataagcatt | tatgtaaaac | tgagtatttc | aaagagaaac | catttacaat | 780 |
| tggaatttcc | acctgtgtgg | ctgtttgcag | acctacctct | gtcttccatt | ttgcatcctg | |
| tcagtgctat | aattagtttg | atcactttgt | cttgtttttc | agtgtctaca | attatagett | 840 900 |
| attcactatg | ttctaactat | ttaaaaataa | tgggccgggc | geggtggete | gtgeetgtgg | 960 |
| tcccggcact | ttgggaggcc | gaggtgagca | gatcacaggg | tcaggggatc | gagaccatcc | 1020 |
| tggctaacac | agtgaaaccc | cgtctctgct | gaacatgcaa | aaaaattagt | cgggcacggc | 1020 |
| ggcgggcgcc | : tgtggtccca | gctactcggg | aggctgaggc | : gggagagtgg | cgtgaacctg | 1140 |
| ggaggcggag | , cttgcagtga | gccaggattg | tgccactgca | ctccagcctg | ggcgacagag | 1140 |
| cgagactctg | , tctcaaaaaa | aaaaaa | | | | 1100 |
| | | | | | | |
| <210> 1484 | Į. | | | | | |
| <211> 2375 | 5 | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1484 | 1 | | | | | C 0 |
| ctttttttt | ttaagacaac | : agtaatttat | ttagctcctg | g attgtgtgaa | tgggcaattt | 60 120 |
| gggctgggat | . ctacttaaat | gattettetg | gtcttgattg | g gcctcattca | tgtgttagct | 120 |
| accatatta | r ttagactagt | atgacttcag | r ctaggaaago | c atgtttctgo | ttcatgtggt | 180 |
| ctctcattct | . ccaqcatqct | : cactcaacat | : gttcatggct | : gggtaaggtt | ccaacagaca | 240 |
| tttataagg | c ctcttgaaac | : ctaggcttgg | , aactggcata | a cagtcactto | ttccacattc | 300 |
| tattgatca | a atcaagtcac | agtgccagco | c cagattcaaa | a tggtggggaa | a agagacttca | 360 |
| = | | | | | | |

| tttatggaag | ggaggagctg | caaatttcat | tgccaagagg | tgtggatacc | cagaaagata | 420 |
|------------|------------|------------|------------|-------------|------------|------------|
| catttgacaa | accatctatc | aaagttactg | tcagaggtat | gtttttggaa | atatcatttg | 480 |
| gagtgggatg | tgtcctgtat | gactggaatc | gttttctatt | tgtaacagag | aagcgtgccc | 540 |
| actccttgca | cccatagata | acccaatgcc | gaaggatatg | agagagag | atgtccagtt | 600 |
| tgtgcctctc | ccagcttctt | gtccagagac | tccttggttt | agattttgat | acactactta | 660 |
| gaaaaggtgg | agagtttctt | taagatttca | tccacagagg | gccgcacaga | gggatcatgg | 720 |
| gcccggcact | catcaatgat | ctcccgcagc | tctgaagggc | agtcttcacc | cagtggctcc | 780 840 |
| tgctgccgct | tcacagccac | cagcttgcgg | atcttctcag | aattacagcc | ttgaaacggg | 900 |
| atatctccag | tggcgatttc | ccagaggacg | attccaaagc | tgtatatttc | agactttaca | 960 |
| tcatattgat | aaaatacatc | ttccagttcc | tgaggtgaga | gatatgctgt | agatttgact | 1020 |
| ctgtctgtct | tttctctcgt | agttcccaaa | ctcatggaag | tetgtgtttt | cctcaactca | 1020 |
| aatcctgcaa | gcggtatagg | cctcgggctg | ccccaggac | taggaccatg | cgcttgccaa | 1140 |
| atgtgaggtc | tttttcccta | tccaacagct | ccctcagggt | cccgagttca | cagtacteca | 1200 |
| tgacaatgga | gaattgaggc | ggagtcactg | tttcatcaat | gcaaatccca | atatacyca | 1260 |
| ggatgttggg | agattcgaat | ttcttcatgg | ttttgatete | tetacigada | greegeerea | 1320 |
| ctattgcaat | gctgccagcc | tggagttttt | tgaatacttt | targgecact | ggagetetge | 1380 |
| ggtattctcc | tttataaagt | gtgctgactt | cattttccct | cagcagaacc | tacatacatt | 1440 |
| ctgaaagctg | ctccttcttg | ateteettga | trigererry | cygyatetee | totastooto | 1500 |
| ttggtggtaa | atactgcctc | aaagttteet | tgatttettt | ataganagat | cacatatat | 1560 |
| tcagtgaagc | ttctatttt | tcattatete | ttettageat | ttggataget | ggtgaaaga | 1620 |
| cgtctgcatc | ctgctgatct | teetgtgeee | aggacgetee | canagaratas | ggtgaaatag | 1680 |
| gcatgcgttg | ctcaacctga | agtaacagcg | agageteett | tagacatta | gagatattgg | 1740 |
| tgttcacgtc | cttgaagagt | attttgteet | ggettgetgt | cagaaaccty | ttgaaggggt | 1800 |
| atctattgct | gaacttttct | ateteceat | cageeteete | tagttagta | tagaageggt | 1860 |
| tcatggctgt | ggttaacttc | tcagagggca | egeteetett | aggagagtat | ttattaceat | 1920 |
| ccagaggctt | gatcaggccg | aggacgcggt | ggeeeaggeg | ggtgataata | tacttcaaat | 1980 |
| atttcatctc | ttcacaccgt | ttgtggatga | teastasst | gytyataata | geeccaaac | 2040 |
| tttccatgcc | ttcgcgcctc | ccgaggggtg | raggedeaat | tagagagaga | agaagtttgg | 2100 |
| aaaagctcgc | tcttccacct | tettteecae | gacegeetee | tgeeeaggeg | agaagcccgc | 2160 |
| aaacgcgagg | cccgcgggag | tteeeetgeg | cecetttee | eaggagagaga | accergeace | 2220 |
| ctgctgactg | taccggacgc | cacacgtggc | tggcggcgac | aaggegeeee | garccccacc | 2280 |
| tgagggaaac | cccggccact | gcagctgcac | Ligageaggg | tecetteact | cayccacteg | 2340 |
| | tctgtccagt | | | teaggtetgt | gatgeetgea | 2375 |
| gagaatggaa | ttcgatatca | agettatega | caccy | | | 2373 |
| <210> 1485 | | | | | | |
| <211> 1330 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1485 | | | | | | |
| tacacaagcc | tccacccagc | ttctaattgt | ctcactgaga | acagacaaaa | ctccagtaga | 60 |
| atccttgaat | gacagctaat | tgtctccaga | aaaaatccaa | aattgcctcc | ctcccttaat | 120 |
| tgtagtgcag | catgattctg | tttttctgct | gggcccctat | ttgcttcttt | ctgtgcaatg | 180 |
| aatcattgaa | agagtgacca | ccacggactt | ggagaatctt | tgtagctttt | agtctgtgtt | 240 |
| tgggtgtggc | tggagagaca | aattaacaca | cagagccgga | ccttgaaggg | gaaggtcctc | 300 |
| atttgtctca | gattgggatc | atttggggaa | tcagaaaatg | tttatatcag | aaaagaagag | 360 |
| aagtcaatgt | gtttcgcagg | tttgtggttt | tttgaaggag | aaacatctag | attctagtcc | 420 |
| tgttcctctg | cctccttctt | aggtgatgtt | agmcaaaata | attcacctyt | ctgagtcaat | 480 |
| ttgcttatct | gaaaaatagc | awtaacaaca | gcactcattt | tactagggca | tgtgaataam | 540 |
| cagattttt | cccattgagt | ggcaggtatt | tattgagtgc | ctactatgtg | ccaggcacca | 600 |
| tcctactctc | tggggataca | gcagtgamca | aamcagacgc | acacctagtg | atgagggatg | 660 |
| gagtaaagcc | cttagccgat | gccagacaga | ggacatgagt | cacctgtagt | cgctgccact | 720 |
| gctgctattt | catggctaca | ttttgacccc | tgtggaccca | ctgaaacctc | ctcactgcct | 780 |
| cacaggcaga | acaaggacag | ggtcttggcc | accaagttta | ctcacttgag | ctgcatttag | 840 |
| attattcttc | cagctaggcc | atgacagtag | gtagtggcag | ctctctgtaa | agatgagggg | 900 |
| tccccagctc | ggacccctgg | tttcctccac | ctgcctggac | cttacagtgg | tagccaggtg | 960 |
| tgtcctgctg | actgggaagc | tccttacctg | ggtgcttgaa | gtatggctcc | ttagcatgtg | 1020 |
| tggagagaag | gctattatga | tagcaacctg | caggggtggg | atgtgtacca | gaccttcacc | 1080 |
| ctggaactcc | cgaggaagtg | cctgcagatt | gcctggcagg | tcttattcgg | gtgatgtaga | 1140 |
| gcagaacgct | ggggccaggt | tctgaagtca | gacccctgga | ctcaactcac | gcacaactcc | 1200 |



```
tagcctgggt gacagaatga gagcccatca cacacaaaaa aaattgcaca tatttatgga
                                                                   1200
gtacagtgtg atatttcgat aacatggata caacgtataa caatcaaatc agggtaatta
                                                                   1260
gcatattaat actctcaagg atttatcact tctttatggt tgagaagact caaaatccat
                                                                   1320
tettecaget aatttgaaaa tataaaatga attgttaatt atagteagte tatagtaeta
                                                                   1380
ttgaacacta gtaacttatc cttcctatct aactataaac atatagatgg tcaataggca
                                                                   1440
tatgataaaa tgctcaacat aactataaac ttcagggaaa tgcaaatcaa attttaaaaa
                                                                   1500
aatttttact gttggccagg cgtggtggct catgcctgta atcccagcac tttggacagc
                                                                   1560
cgaggcgggc ggatcatgag gtcaggagat cgagaccatc ctggctaacc cagtgacccc
                                                                   1620
1680
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa
                                                                   1725
<210> 1488
<211> 903
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (302)
<223> n equals a,t,g, or c
<400> 1488
tttagtcctg tgagtaaagc tttggttttg atgactgtct cagggaaagg tagaaaggtg
                                                                      60
cttggtggca gtgaacttcc tgctgcagaa gtgggtgtga ccccagtgct ggagaatggg
                                                                     120
ctgtgagccg agtttcccgc acctgcatga gtgagcgcca tggtccttct ccacagagcg
                                                                     180
tectgetgte actttggttt gtgttaactt tgacgeettt ettgtttett actetgettt
                                                                     240
cctgcatgga gcacacagcc ccggctccct ttcagtctgc atggcagaca cctggcctct
                                                                     300
rnaggtccag ttcattctgt gtcccctttc ggtcgtccct atgttccgtc aggtgattga
                                                                     360
 gggtgaaggt cggccttggc agcccagtgg aaagtccctt gactcctggc cgtcagtggc
                                                                     420
 agtctccagc ctttgggarg aggaaacttc tatttaacaa graatggaat tgactttgcc
                                                                     480
 acamacagcc agagcgatga tttgtagagc caacctgctg agacattcaa agcatcagtc
                                                                     540
 gtagggtcag gaccgccagg tgaggtgtgg ctccacctgc agcagcctgg ggcaggttgc
                                                                     600
 ctagcetetg getttageat eccettetgt gaaatgggga aagtgatggg acetggattt
                                                                     660
 gtagggtggt tgtgaggacc tacaggggtt tttgcaaaat acttagccca gggctgacta
                                                                     720
 aaagattcag agacgctggg catggtggca cacacctgta gttccaggta ctcgagaggc
                                                                     780
 cgaggcggga ggatcacttg agcccaggaa ttaaagtcca gcctgggcaa catagtgaga
                                                                     840
 ccttatttct taataaaaaa aaaaggaatt cgatatcaag cttatcgata ccgtcgacct
                                                                     900
                                                                      903
 cga
 <210> 1489
 <211> 1773
 <212> DNA
 <213> Homo sapiens
 <400> 1489
 cagagaaagg aaaaaattct tagcacagta cttattacaa tctgatttct tttctttgtt
                                                                       60
 tttctgtcac cttttactag gatgtatgct ccatgagagc agagcttcat ggtcttgttt
                                                                      120
 gcctctctgc tgtctccaca atgactgcag cagtgtctgg cacagagatg ccaaacattt
                                                                      180
 gctaaaggaa tgagtaggga atcaggttct gttttgtctt acacccccca gtgcctacca
                                                                      240
 ctgtgcttgg cccataacaa gtgcccagaa actggtgggt actctgaggc cactctgaat
                                                                      300
 ataattgcta ttggtagatc tgtgttctca tcctagaatt tagaatggga aagcggttta
                                                                      360
 gaactaagag tettteaagt gtttegagee aaactgeaaa gettttagaa tattgtetet
                                                                      420
 gcagcctgaa actgactatt acacaggttc ccccagttcc cattcaagag cgaagtctag
                                                                      480
 atgtttagaa ttctatgcct aaatagcaga acggaagcct cattttattt tgattaaatt
                                                                      540
  cctattttaa tacatacatt gcatcagtca gtgagtcagt gagtatttat tgagcccctt
                                                                      600
  caggatacaa agtagtgctc tggtagagct attgagtttg aaatattagt cacattttta
                                                                      660
  aaccaaaacc aaatccccaa gtagttgaaa gtgctgttca aattgtcaga gtgcagttcc
                                                                      720
  tgtagactgt attttgtgag atgggctttt actttatatg ttcccacttg ggcaggaaca
                                                                      780
  aaagtttggt aaattactga ggtattacat tttaccaaaa tgaaattttg aagtgatcct
                                                                      840
  tcatcattag ctttcttcct gtccaattgt tgagggagtg tgtgataatt acagcatctt
                                                                      900
  ttgagtaatt taagattttg ggatcttgtg ctgccaggac agggtaaaga ataacacttg
                                                                      960
```

| cetteactet ttgacactag tgtteaaatt gggcagggaa agaaggggta ttattgttge eteccagate ceaactetat ecaaagtact gteteettta ettetgtgag etgacagggt ttgeagaaca etaaaatee tagactatet tgacateace aacegtagag tttgtteagateggteetetetetetetetetetetetet | 1020 1080 1140 1200 1260 1320 1380 1440 1500 1560 1620 1680 1740 1773 |
|--|--|
| <210> 1490 <211> 2218 <212> DNA <213> Homo sapiens | |
| | |
| <400> 1490 | 60 |
| <400> 1490 ttttttttt tttttttaa tacaactgaa ccaacaaatt tatttagtta gtgctgataa tttttttttt tttttttaa tacaactgaa tacctggtct acttaatgat gccctttgtt agacagcagc cttgagagac aagcagtaat tacctggtct acttaatgat gccctttgtt | 120 |
| | 180 |
| the second design of the stream and cade cut acqueeus consists | 240 |
| and that at a | 300 360 |
| to a secretary to the saffit of the contract o | 420 |
| dadtaadte cyddadd Caladdad Cyddod | 480 |
| | 540 |
| | 600 |
| the telephane the safering talleady at the telephane of the safering talleady at the safering ta | 660 |
| The tracked atrackation (10) diddiddidd codd good good good | 720 |
| The state of the s | 780 |
| | 840 |
| cgtcagtcag tgttacagta ctgtcactgd dggggddut 5 5 caccaccaca gcggcgaggt atgctgtgta atgtccagaa ccaaccccgg aaccatggtg caccaccaca gcggcgaggt | 900 |
| atgetgtgta atgeteagaa ceaactgttgt caggetetag taagtageat tteatgteta catacaggea geteteeggg ceaetgttet caggetetag taagtageat tteatgteta | 960 |
| ggcctctcag tggaaattct acgtatgtat caactttatt tcttaaatat gctgtccaat gaaatctttt caaatgtaag catagcacct tgggtagttt ttgaatccaa aactttttg gaaatctttt caaatgtaag catagcacct tgggtagttt ttgattcta tcaagttctt | 1020 |
| | 1080 |
| the second against the design of the second | 1140 |
| The state of a safe as a s | 1200 |
| The secretary description decided decided as a second | 1260 |
| | 1320 |
| | 1380 |
| the manage and address to a to the design of the second se | 1440 |
| the formation of the coasacaa caladadada uque coasas to the coasacaa | 1500 1560 |
| the second and the se | 1620 |
| LEEARLA ALACAMENTA FOODCOLLO EGOCGO CONTRA | 1680 |
| The state of the s | 1740 |
| | 1800 |
| The seast tract transfar full lull lay lycly agold | 1860 |
| tecttett atgeetgtea getgtgaaag etgagtttte caagttetgt aagtgttete tgaetttetg taccagteee agettggtgt cattaaccae aaaatcatea eagegataae tgaetttetg taccagteee agettggtgt cattaaccae atgaettta tettgetttt | 1920 |
| | 1980 |
| The standard of the standard o | 2040 |
| The second of th | 2100 |
| The state of the second | 2160 |
| ccaaatcctt ccacagtgga cacttgaaca agtcaaacag acccaagcgg acgcgtgg | 2218 |
| Coadacocc coadag-gg | |
| <210> 1491 <211> 1119 | |

```
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1075)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1077)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1094)
<223> n equals a,t,g, or c
<400> 1491
tettacgcaa ccagatatge tatgactgte tggtactttg atgetgaaga aagggeagaa
                                                                        60
gccaaaaaga aattcaggaa tttaactagg aaaactgaat ctgccctcac tgaagactga
                                                                       120
ccgtgctctg aaatctgctg gccttgttca ttttagtaac ggttcctgaa ttctcttaaa
                                                                       180
ttctttgaga tccaaagatg gcctcttcag tgacaacaat ctccctgcta cttcttgcat
                                                                       240
ccttcacatc cctgtcttgt gtgtggtact tcatgttttc ttgccaagac tgtgttgatc
                                                                       300
ttcagatact ctctttgcca gatgaagtta tttgctaact ccagaaattc ctgcagacat
                                                                       360
cctactcggc cagcggttta cctgatagat tcggtaatac tatcaagaga agagcctagg
                                                                       420
 agcacagcga gggaatgaac cttacttgca ctttatgtat acttcctgat ttgaaaggag
                                                                       480
 gaggtttgaa aagaaaaaaa tggaggtggt agatgccaca gagaggcatc acggaagcct
                                                                       540
 taacagcagg aaacagagaa atttgtgtca tctgaacaat ttccagatgt tcttaatcca
                                                                       600
 gggctgttgg ggtttctgga gaattatcac aacctaatga cattaatacc tctagaaagg
                                                                       660
 gctgctgtca tagtgaacaa tttataagtg tcccatgggg cagacactcc ttttttccca
                                                                       720
 gtcctgcaac ctggattttc tgcctcagct ccattttgct gaaaataatg actttctgaa
                                                                       780
 taaagatggc aacacaattt tttctccatt ttcagttctt acctgggaac ctaattcccc
                                                                       840
 agaagctaaa aaactagaca ttagttgttt tggttgcttt gttggaatgg aatttaaatt
                                                                       900
 taaatgaaag graaaatata tccctggtag ttttgkgtta accackgata actgtggaaa
                                                                       960
 gagctaggtc tactgatata caataaacat gtgtgcatct tgaacaattt gagaggggag
                                                                      1020
 gtggagttgg aaatgtgggt gttcctgttt ttttttttt tttttttt ttagntntcc
                                                                      1080
                                                                      1119
 tttttaatga gctnaccctt taacacaaaa aaagcaggg
 <210> 1492
 <211> 1955
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> SITE
 <222> (1106)
 <223> n equals a,t,g, or c
  <400> 1492
 gtaattttaa aattttcaag tagccacata ataaaggaaa caggtgaaat ttaatgacat
                                                                         60
 atttccttta atacggtata tccaaaatat tattatgtca acctataatc agtataaaaa
                                                                        120
 cctgttactg aaatatttta tagggcccat ctcagttcag actagccaca tttaagtgct
                                                                        180
  tcatagccac atgtggctca tggccatcca tatttggaca atgtacttta gactattgca
                                                                        240
  tetgtatact ettgtgeegt cagetggggg gtggggtgtg tgtgegtgta taccaaggea
                                                                        300
  gtgagcatct gagctttgaa cctcaaagac caaaatgccc tgcccatttt cctgcttatc
                                                                        360
  agctgaggaa tctttaccca cattgacaca tgggcttgtt ctgacccaag tgcatgcagg
                                                                        420
  cttccagagc agattcagag gcctaactta gtcctttagc tttcctccca gcacagaact
                                                                        480
  cccaaggtta tctgcaagta ggccttgcct agagagactg agttttcaag ttgtcagttt
                                                                        540
  teccaaattg tectcaagea tetteetetg gaateacett aetgtttagt aaacatteag
                                                                        600
  aggacttgct acacatctgg gcagtctgca ttgtaattca tatgtgttta cacatttgtg
                                                                        660
```

| tottcatoty ctaaagcaco titgaaccat attgtaatto ataatatoty aagcaattat | 720 |
|--|------|
| tottcatctg ctaaagcacc tttgaaccat attgtattatta tatctgaagc aatccccaga tatgaattgt agtaattcat aatattgaag catagaggag agtggaggag | 780 |
| tatgaattgt agtaattcat datattgadg tgdttedaaa agtggcagtc cgtgacgcag tacgggttag gcatggccct gctctgagca ggatggcaaa agtggcagtc cgtgacgcag | 840 |
| tacgggttag gcatggccct gctctgaged ggddggtggtggt tttatcttaa ttaaaatgac cccttgttac cccaggctat tactaaatgg tgggtggtggt tttatcttaa ttaaaatgac | 900 |
| atcaccaaca atgggccctt tectgtetge caggaaaagt tttetgtagt gacgcacgtg | 960 |
| The state of the s | 1020 |
| ttgtgtgtgt atgtgtgcgt ttgaggctat detactate ctgacatgtt taagggaagt cttggaaaaa aacaatgaac gctggtcatt gatatgtata ctgacatgtt taagggaagt | 1080 |
| cttggaaaaa aacaatgaac gctggtcatt gatatgat gggtggagtg acggacacat tactgtggtc tgtaacttat gaaatncatw aaaatatgat gggtggagtg acggacacat | 1140 |
| tactgtggtc tgtaacttat gaadthcatw addattgdd gggsgasgas ccatactca ggacagatat gaagcaagca ctgtaaaata ttagtggtag tttttgtatg cccatactca | 1200 |
| ggacagatat gaagcaagca ctgtadaata ttagtggtag bootstagtggtgaa cggcaccatt attcacagta gctaagagat ggaagcaata tgtgcccatc agagggtgaa | 1260 |
| cggcaccatt attcacagta gctaagagat ggaagatatta ttcagcctct aaaaggaaga tgatcaacaa aatgtggtat attcatacag tgaagaaga atgatgatggaagtaag | 1320 |
| tgatcaacaa aatgtggtat attcatacag tgtaagac atgatgctaa gtgaagtaag | 1380 |
| tgatcaacaa aatgiggtat atteateday bysanta atgatgataa gtgaagtaag tacgctgaca tgtgctgcaa catggatgaa tcttgaggac atgatgctaa gtgaagtaag | 1440 |
| cagtcactg gaagmcaaat actctatgct yccatttatg tgaagtatct agagcagtca | 1500 |
| ccagtcactg gaagmcaaat actitutget youngers ggggaggagg aaatgaggag aatgcataga aacaagtaga atggtagttg ccaaggmctg ggggaggagg aaatgaggag ttgtttaatg ggtatagtgk ttcagttttg caagataaaa agtcctgtgg attggttgca | 1560 |
| ttgtttaatg ggtatagtgk ttcagttttg caagactattc agttaagatg | 1620 |
| cagttaagtt atgtgaatgc tgtatgccaa ctcaactgtc actctaaaat ggttaagatg | 1680 |
| gtaaatetta tetttatttt accaeagttt tttttaaage atggtaaaca ceattteeca | 1740 |
| gtaaatetta tettiatitt aeedagtee teeaagtaa gatatatttg ggaaacacag ggatgtaaat eggtactaaa aaaaaagtge teeaaggaat tetaagagga titaacaaat | 1800 |
| ggatgtaaat cggtactaaa aaadddgtgo totaagagaat tctaagagca tttaacaaat ggataactaa ggttagatag gtgttcttta ttgcaggaat tctaagagca tttaacaaat | 1860 |
| ggataactaa ggttagatay gtgtteeteta teggaggete atagcattte acaaacatta taatttacac tgggaatttt cagtgtggag ggtctggctc atagcattca aaaaaaaaaa | 1920 |
| taatttacac tgggaatttt tagtgtggag ggottaatgg tagaaactca aaaaaaaaaa tacttcagag tcccaaagcc tttaaataaa atgttaatgg tagaaactca aaaaaaaaaa | 1955 |
| aaaaaaaaa aaaaaaaaa aaaaagggcg gccgc | |
| | |
| <210> 1493 | |
| <211> 1528 | |
| <212> DNA | |
| <213> Homo sapiens | |
| 100 1103 | |
| <400> 1493 aattcccggg tcgacccacg cgtccgcatg attacactaa tgcattccag ccttggcagc | 60 |
| aattcccggg tcgacccacy cytocgata aaaaataaaa taattgctgt gaaatttcta agatcaagac cctgtctcaa aaaaataaaa taattgctgt gaaatttcta | 120 |
| the termonograph and address of the control of the | 180 |
| | 240 |
| - Librarator Cacatoratt OCEEQUACAY accaeggaga cacous | 300 |
| The same of the sa | 360 |
| | 420 |
| Library astronomy and addition and consistent | 480 |
| | 540 |
| harm when aggree a aggreent ECEGILLICAL CCCACCCACC | 600 |
| the magagagag agent of the addition of the control | 660 |
| | 720 |
| the terrogator that are and a first country and the country of the | 780 |
| the beautiful for the accordance to the accordance according to the accordance to th | 840 |
| the transfer of daacator again colling dacing control of the colling of the colli | 900 |
| the state of the control of the cont | 960 |
| The second of th | 1020 |
| LE TELEBRACE FARCCARATA ACCULLALCO COOLGEGEGE CACAGATATA | 1080 |
| antique de la constant de la constan | 1140 |
| The state of the s | 1200 |
| | 1260 |
| | 1320 |
| the control of the co | 1380 |
| the second of the second and the second of t | 1440 |
| gcagaggttg cagtgagtcg agatcaggcc attgcactcc agcctgggtg acagagcaag | 1500 |
| gcagaggtty caytyaytcy agateaggee actions and a control of the cont | 1528 |
| actctgtctt caaaaaaaaa aaaaaaaa | |
| <210> 1494 | |
| <210> 1494 <211> 2069 | |
| <211> 2069 <212> DNA | |
| <212> DNA <213> Homo sapiens | |
| CSTON HOMO BUDIONS | |
| | |

| <400> 1494 | 60 |
|--|------------|
| <400> 1494 ccacgegtcc gcctcgtgct catcagagca tgccaatcct aagccattgg acatatgtag actggttttt gttgttgcta tgtacatata aatatatata taaaatgaac atagttcatg | 120 |
| actggttttt gttgttgcta tgtacatata aatatatata ttttagtcag aacttcatga ctttcagata aaatgagtag atgtatattt agattaattt ttttagtcag aacttcatga | 180 |
| The second of the section and the second of | 240 |
| data data da | 300 |
| The same and a same and a first the same and sam | 360 |
| the the total of | 420 |
| The state of the s | 480 |
| | 540 |
| | 600 |
| the transfer of the transfer o | 660 720 |
| LELECTER ASCATSSART MECLAUGILLA GOLOCOSSO SONO | 780 |
| the metal astrostron Fortratilly didcodoge constants | 840 |
| attagg oddaaaffdf dadillig dalligggo soots | 900 |
| | 960 |
| Li Librattta accaattaac adaalcidad aageeeedaac aasee | 1020 |
| LELEN WOODERFREE STOFF AND ACADACCOCC SOCIETIES | 1080 |
| at a reaction of the control | 1140 |
| the stage day of a contract and | 1200 |
| | 1260 |
| | 1320 |
| | 1380 |
| L-L-ma dadtdaaaa dtaffaldda dtadaacagc aaagccia | 1440 |
| The transfer of the contract o | 1500 |
| t the transfer of the transfer | 1560 |
| tanatatta ttaataaadt taatuladul lulaaguud agaaan s | 1620 |
| gattetgtet geceeattea attgggggget actaattgat ttgttgettg gattteetga | 1680 |
| | 1740 |
| gaatttetet attigtagga ggggtetete gaatetgttg gggaagtteg gaaagaaace tatgggtgtg atgcaccgat ggtagccaag gaatetgttg gggaagtteg gaaagaatta | 1800 |
| tatgggtgtg atgcaccgat ggtagctatg gaussians 333 atcaacatta ttttctttct tttattcagt ttaaagtaaa ctttatcctg gatgtttaga atcaacatta ttttctttct tttattcaga tacaatatt tcttttgaaa | 1860 |
| agagttatat tatggtgttc agagattaag ctgacttgga tacaatattt tcttttgaaa | 1920 |
| agagttatat tatggtgttt agagattatg organisms accagttat getteatgea atgaatttte ttttteattt gtgattttta aaaaatgttg caccagttat getteatgetg tegttacate tteateaggt taatgtaatg tetagtteet ttgeaataaa tatattgetg | 1980 |
| tcgttacatc ttcatcaggt taatgtaatg tctagetees tegendens caaaaaaaaa aaaaaaaaa aaaaaaaaaa aaaaaaaa | 2040 |
| Caaaaaaaaa aaaaaaaaaa aadadaaaaa aadadadaaa aaaaaa | 2069 |
| aaaaaaaaa aaaaaaaaaaaaaaaaaaaaaaaaaaaa | |
| 040. 1405 | |
| <210> 1495 | |
| <211> 1528 | |
| <212> DNA <213> Homo sapiens | |
| <213> HOMO Bapiens | |
| <400> 1495 | 60 |
| and anticata continuos aaggladada addadada addategas | 120 |
| | 180 |
| the managed transfer of Claudiaud Cycloudges of the second | 240 |
| | 300 |
| | 360 |
| | 420 |
| The second of th | 480 |
| i = = = = = = = = = = = = = = = = = = = | 540 |
| | 600 |
| | 660 |
| The state of the s | 720 |
| The second of the first the contract of the second of the | 780 |
| The state of the s | 840 |
| THE TENED OF SESSON FROM CATOUCLUCE CONCOMMON SOCIETY | 900 |
| . Line and are the adapt of the control of the cont | 960 |
| The same and the same of the s | 1020 |
| | 1080 |
| ccgaaactaa cttttagcta acaataaggg cogostoon ctgagaaagg tttggatgac tgaaatattt cctctacagt caaggacttt ggcatgyggt | |
| | |

```
ggctgaaact gagctttttt gtgtgggctc cagttctcac tgttctgcaa tgctcatggc
                                                                1140
aagttgaatg gtgagctagc ttataaatta aagagctctg aactgtattc agaccgactg
                                                                1200
ggtatctagc ttactgtttt aacatcattg ttgaaaccag accetgtagt ccagtggtgc
                                                                1260
tgccctgttg tgcaaactgc tcctttttct cgtgtttttg taaagagctt ccatctgggc
                                                                1320
tggacccagt tcttgcacat acaagacacc gctgcagtca gctaggacct ttccgccatg
                                                                1380
tattctattc tgtagtaaag catttccatc aacaatgcct aattgtatct gttatttttg
                                                                1440
1500
                                                                1528
aaaaaaaaa aaaaaaaaaa aactcgag
<210> 1496
<211> 1751
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1741)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1742)
<223> n equals a,t,g, or c
 <400> 1496
aattcccggg tcgacccacg cgtccgacaa cttttcttta gaaccacatt attggtcata
                                                                   60
atccttgtta ctgtcatgag gattgttgca tgggttaaac acaaacacag actagcaatg
                                                                  120
 cacttgaaca aacctggtgg tctttggaaa taaatcacca ttagatttca cctggttatg
                                                                  180
 ctgcatccca taagttccaa atgaatcacc tgcttatcct attaacgaag catttaattc
                                                                  240
 acacacaaat gettgaattt eeeetgtata aatgtagtea tgegatteaa ettttetaat
                                                                  300
 aagatttgtg aatgctgcat catgatgaaa atgtggatta actgtgggtt gcatgcctgt
                                                                  360
 tgttcatact tcagtgatgg tcacacacaa aacaagatga gttttactta ggtgaaacat
                                                                  420
 tattaaactg tactaacaat acagaaacat attctctttg tcgcttttta tcaccaaaac
                                                                  480
                                                                  540
 tgaatggcaa atatgtcttg acattacttg gatgaactgt ggctagcaaa atggaattaa
 cttagccact ataattttt aaaacattaa agtttctaaa ttgtttttgg gggccgagta
                                                                  600
 acgcagagtc aataaaggtg gttatattgt aagcttttag atggtgctta agaattctta
                                                                  660
 tetttttaaa tageagtatt tttttttaa gaataaattg taaggageaa ataaggeaga
                                                                  720
 atgccactct accctcaggt caattttatg gtatatgaaa atgccagtaa tatttgtgcc
                                                                  780
 acttgccaac tcgggggagg aggggctttt cccttactgg atacttttgt tatagtttga
                                                                  840
 ctatgtcatt atgttgttta gagagcctcc acaatgagaa gttgccactg cagggctaac
                                                                  900
 tegeetteag aaataateag aatgatteaa gggteaaace aettteatee ettaaaatat
                                                                  960
 agggactaat atttcttttt cttttttta aaaaaaaacat ttcttctgtg gcttagaaat
                                                                  1020
 gtgccagtgt gttcaaaaca tttacaccaa tttcaccaga tttaggacct attaaaaatt
                                                                  1080
 caaacaagtt tottttttt ttttttttc tgtgtaacag ggatttttaa ataacggact
                                                                  1140
 atatgcattc ttttgttatt tcacacttca gttaaagtga taacaatggt aaactgtgat
                                                                  1200
 cattatcaga ctgactgaat gctttctgat ttccagtgag tgatctagtt ctacgtatta
                                                                  1260
 cacaggtgta atatctgtga gtgtaaataa ctggaactgt acactgatta acatgacagt
                                                                  1320
  ttctcttttg ttgttcttat ctgtactgta ttatagtatg tgggtataaa tatctacaag
                                                                  1380
  tatacacaca tatgtacttg tattccacta ttgtaacctg aaagaaagac tatgtattcc
                                                                  1440
  cttttttaat toogtactgg tatttgtgtt atttaaaaag caaaattotg ctotatttag
                                                                  1500
  ttgtataata ttagaggata ctttgctgtg cacaattcca agtgccttag aacattgttt
                                                                  1560
  agctttccta agtatatata aatgcatata tgtataaaat tgggaaaagt tacctcaata
                                                                  1620
  1680
  1740
                                                                  1751
  nnaaaaaggg C
  <210> 1497
  <211> 752
  <212> DNA
  <213> Homo sapiens
```

```
<400> 1497
tegacecacg egteegggae ettaagaaca aettgetagg ttegetgegg atggeetgga
                                                                  60
agtettttae cagageteca taccetgeet tacaagette agaaacacca gaagaaactg
                                                                 120
aagcagaacc tgaatcaact tcagagaagc ctagtgatgt taacacagaa gagacctctg
                                                                 180
tggcagttaa agaagaagtc ctgcctatca atgtggggat gctgaatgga ggccaacgca
                                                                 240
ttgactatgt gctacaggag aagcctattg aaagttttaa tgagtattta tttgctttac
                                                                 300
aaagccatct atgctactgg gagtctgaag atacagtatt gctcgtcctc aaagagatct
                                                                 360
accaaaccca gggtatcttc cttgatcagc ctttacagta aaaatgaccc atctatgggc
                                                                 420
tggcttaata cggacattga ggggatcctt ccccagaaaa tccacctgtt tgttgctggc
                                                                  480
aattttcctc tcctcagctg cgtcatttcc tttttgttgc ttgccactac tcaccactgg
                                                                  540
ggtctttgga agataatctt cctctttgga aatgaatgga aaagcaaaag gccctattac
                                                                  600
660
720
                                                                  752
aaaaaaaaa aaaaaaaaa aaaaaaaaaa aa
<210> 1498
<211> 629
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (2)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (38)
<223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (41)
 <223> n equals a,t,g, or c
 <400> 1498
 tngaggtacg cctgcaggta ccggtccgga attcccgngt ngacccacgc gtccgctcga
                                                                   60
 agttgtaatc tctagggaga catttatagc atcttctttg acttcagcat gtgaaagagt
                                                                   120
 aaggaaggat agtccaggcc aaggaatcaa cttttgcagg gaagggaatt ttgtagggta
                                                                   180
 gtcagaggcc agtgtgtcat tctctgtggt tacagtgtac tgtaggtggt gcgaggtgac
                                                                   240
 ataagcaaaa gtgcctggag cttagtgggt gatgactaaa tcagtattct tttcctttct
                                                                   300
 ttccctttcc ctaagcctcg gctgatgctt ctctgtcaaa tcaggttcat tgtcagcctg
                                                                   360
 ctgggttttt tttttttta gtatatcgac tatagttaag acttcaattt ttccaattag
                                                                   420
 tattttaaat tatataataa ttaaattcat cctgttaaaa aattaaccct tgtaaaaaatg
                                                                   480
 attattcttc tctccagaat gaagtgctgt tacatttttc ttacatatcc ttcagaaaga
                                                                   540
 cttctgtata tataaatgtc catatgtttt cttcttttca aaataaatca tattataaat
                                                                   600
                                                                   629
 taaaaaaaa aaaaaaaaa ggcggccgc
 <210> 1499
 <211> 809
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> SITE
  <222> (727)
  <223> n equals a,t,g, or c
  <220>
  <221> SITE
  <222> (738)
```

```
<223> n equals a,t,g, or c
<400> 1499
cccacgcgtc cggtggatca gcattttaga aactacaaat ataggtttga ttcaacactt
                                                                  60
aagteteaga etgtatttet tgegggaaga gggggaetaa aeteaaceta acacattaaa
                                                                 120
tgtggaagga aaatatttca tttagctttt ttattaaaat acaagtaata ttattacttt
                                                                 180
atgaacaatt ttttttaatt ggccatgtcg ccaaaaatac agcctatagt aaatgtgttt
                                                                 240
cttgctgcca tgatgtatat ccatataaca attcagtaac aaaggtttaa agtttgaaga
                                                                 300
ttatttttta aaaaggtaaa tggttaaatt ttacatgaca gatattttat ctattggcct
                                                                 360
gttccccaaa tggccatttt aaaatgcttg ggtacacttc tcttaagtgg tctagtcaag
                                                                 420
gaacctcaag tcatgctttt gctatcacca atcataatgt acccatcttt aatttatatc
                                                                 480
aggtgtataa atgtacattt ccaaatgaac ttgcacttgt tatattataa ttggaagtgc
                                                                 540
agtcagcaga tgctgttgtg aagctaatgt cacaattatg tgcaaaggtg tgcttcctgc
                                                                 600
660
720
780
                                                                 809
aaaaaaaaa aaaaaaaaa aaaaaaaaa
<210> 1500
<211> 1208
<212> DNA
<213> Homo sapiens
<400> 1500
ccacgcgtcc gccagctcca acccacagca attacacttc tccccctggt gaaggaaaca
                                                                   60
cttgcataag aataagaggt tcttccacag gcattttaaa acctttttc tttcctcttc
                                                                  120
tccacaatat cagcatttaa gtttaagcaa gtttttttat ttctagaaga cattttacta
                                                                  180
ggcaaggaat gataagaatc cctgtgtata ttctctatta agctttaatt gtgaaaaagg
                                                                  240
atttgtaggg ctagtcttgg gctgtggcca atctggtatg cttcctgtgt ctgtatggtt
                                                                  300
tgtgctgtaa gcctccatct gttttacaca tcctggggac atggcccaca actgcttgac
                                                                  360
 agaactttgt ttagcaatcc tgctttaggg gatcagccct ctctggccaa tatctgcatg
                                                                  420
 ttttcctact cctgtctctt aaagggcccc acccagcgac tggattttct tctgcctctc
                                                                  480
 tgtgtgggta ctgtgtgtga tatctgtaaa aagtgcgcta attaatttgg cctaaagaaa
                                                                  540
 gacaagaact tggatcaaat tttttttaag ggaagttaaa agctgtggta tctttcagtt
                                                                  600
 cacatgactt taatctctga gaaataaaaa cagccctaaa gactattggt aaaatgcagg
                                                                  660
 tgagatgcaa ggttttctaa gtgttttgag gttaaaaact gctttttggg ttttgagaac
                                                                  720
 tatttgactt gaaggettea caattggtaa ggeetgggga catatggaaa taaccaeget
                                                                  780
 cttaattatg ctgggagtca aaccttggct gcacctagca cacaattaaa caacttacca
                                                                  840
 agtttttacc ttaaaagtta aaaattgcta ggagttacta ttccgagatg taattgagac
                                                                  900
 tacaggaaat agatttatat gcaagatgtg taagaacagt aaaatgtggt gttttttgt
                                                                  960
 aaaatattat aagaaggcat ggaaatgtat acttttgctt agggttaaag gattgtttaa
                                                                 1020
 attaggaaaa agctgaaggt tcaaacaagt ggtggagaat tgtggaaatt aatcttgcag
                                                                 1080
 aagaggttca acatattaac taaattcaaa agggttataa ggttataaaa ggtttttgct
                                                                 1140
 tetttgaaat ttetgagtea teettttgge aaaataaata aettaatgge aaaaaaaaa
                                                                 1200
                                                                 1208
 aaaaaagg
 <210> 1501
 <211> 2141
 <212> DNA
 <213> Homo sapiens
 <220>
  <221> SITE
  <222> (644)
  <223> n equals a,t,g, or c
  <400> 1501
  aaaaaaaaa aaaaccccaa aaactgttac tactaggttg gagtagccta aggcagtagg
                                                                    60
  gcaaggaggt gggcccaggc tggtctgtgg ggagctggag aatggtgact cgagtgacca
                                                                   120
  gtggacaggc aggacccagg ccagcattac aagcggggat gtcaggcagg agcaggggag
                                                                   180
```

240

yttctcgctt ggcagctggt ttatggtaca cttttgaaaa gtaagctccc agggcctggc

<211> 1769

```
cctcacatgc tcagtgaata tttgactgaa gggtcccctc atagcttggg agtattcaca
                                                                    300
ggcctaaatg ttagttatac tattagctaa gcctggtcct ttgttacgaa atttaaaaat
                                                                    360
gaaattgcaa cattcttgtg gaaattcaaa gacatcattt tctttcaaca aattcacaca
                                                                    420
ttertteatg ettettetat acettttace ectaaagtea tecaeteetg agtteeteet
                                                                    480
gctggtttcc caaactgcgc aatgactgcc ccatcatagg cagtggtccg tggagtcggc
                                                                    540
ctcactttcg cctttccccg catctacttg tttccaaggc cagtggtact taactgggtc
                                                                    600
aagttgcctg tgggaccttc agggaacaga attgccatgt tccntcactg cctgcaggga
                                                                    660
aaggstecat tecaageeca gtgaagatgt gtgeetatee ageegeecae caaggatgte
                                                                    720
atctgtagaa tgggtggagg gcaggggttt atttggtgta tatttttaca ttaaaatgca
                                                                    780
cttaatatca ctttgtaaag cccagatgag tgcaaatgtg cctgtaactt cctcctttaa
                                                                    840
tetgtecagg tagtatttag tetttagtet tacattttet ttetecettt attteatgaa
                                                                    900
atteettgag aaaaetteaa cagtaaagaa agaaattteg tteateteae aactetteea
                                                                    960
aacgaggaaa cttagtgaaa tatttcagag cttctagatg tgaggtacaa aacttgggat
                                                                   1020
caaatggaat cttgattcac taaccaattt aagatctgac ttctaatttt aggaactttg
                                                                   1080
ggttatgaac gcttccattt tatacctgtg tctagttagt ttctgcctat ctatccaaga
                                                                   1140
agcttttatc aagggtccac catgtgccag ccactgaagt agatataaat ataaggatgt
                                                                   1200
gtaaggtatg gatgatggta tacgaactgt catcttactg gatttgtccg ctctgttaaa
                                                                   1260
gatacggttc cgaaaacttt ttaaagccct agagagggct ttaaggcaat gtagcatcat
                                                                   1320
atatagaggc atcaacctgt tcatatcttt ctatttaaca gaactgtgca cctgggcaca
                                                                   1380
agggtgtgca caacaggatg tgtacagcag cactgttaaa gtgtagcaca tccatactac
                                                                   1440
aggatettat geaactgttg gaaagaatga agegatgetg caetgtggte atgeagtgat
                                                                   1500
ctctaagaca tattaactag aaagcmaaag gttwacaatg tatagcagct gggcgcagtg
                                                                   1560
actcgcgcct gtaatcccag cactttkgga rgctgagtag gcggatcacc tgaggtcagg
                                                                   1620
agtttgagac caacctggcc aatgtggcga aacgctgtct ctactaaaac tacaaaaatt
                                                                   1680
agctgggcgt ggtggcgcgt gcctgtaatc ccagctactc ggcaggctka ggcaggagaa
                                                                   1740
tegettgaac tggggaggtg gaggttgcag tgagcegaga teacaccact geattecage
                                                                    1800
1860
tgcatagcaa gctgtaatgc tctttgtgtt ttagaatagt agaggtctgg aaagttgttt
                                                                    1920
gcttttcccc agttttttt tgctgtgtta cctctgaagg gaattgaggt agaggggaga
                                                                    1980
 gttagaagga atattcggct tttctatttt atatcctcct aggtgaaatt tttacaacaa
                                                                    2040
 acatgtactg gtgtattttg aaatgttttt aaatttttgt atttcaaaat aataaaatat
                                                                    2100
                                                                    2141
 aaattcaaac tgaaaaaaaa aaaaaaaaaa agggcggccg c
 <210> 1502
 <211> 1118
 <212> DNA
 <213> Homo sapiens
 <400> 1502
 gggggctaga agtctggcac ccaccgcctg gccaggtgtt cgggacgcga ccaggtgggc
                                                                      60
 ggtcgccccg ccccgggagc gcggcttaat agctgagagc ccgggggcca ggccgcggct
                                                                     120
 gcggccaggc aacgccctga gggtggccac gctgccaggt gttccactcc cccgggacta
                                                                     180
 tgggcaaggg cccggggcgg ggagggcggc aggtgctgac actggagctg cgccggagtc
                                                                     240
 ggggaactcg gcctcctaag actgaggaca ctcgcctgct gggccggtcg agctgtgcgg
                                                                     300
 tgccctccgg gacgcagggg gcgctgcagc cacgctgggt caggctccgc aggccctccc
                                                                     360
 aacccgggga ctaacggcgc cggtgacgac ttcgccgcgc gttggtcagc catggccacc
                                                                     420
 getetegege taegtagett gtacegageg egaceetege tgegetgtee geeegttgag
                                                                     480
 cttccctggg ccccgcggcg agggcatcgg ctctcgccgg cggatgacga gctgtatcag
                                                                     540
 cggacgcgca tctctctgct gcaacgcgag gccgctcagg caatgtacat cgacagctac
                                                                     600
 aacagccgcg gcttcatgat aaacggaaac cgcgtgctcg gcccctgcgc tctgctcccg
                                                                     660
 cactcggtgg tgcagtggaa cgtgggatcc caccaggaca tcaccgaaga cagcttttcc
                                                                     720
 ctcttctggt tgctggagcc ccggatagag atcgtggtgg tggggactgg agaccggacc
                                                                     780
 gagaggctgc agtcccaggt gcttcaagcc atgaggcagc ggggcattgc tgtggaagtg
                                                                     840
 caggacacgc ccaatgcctg tgccaccttc aacttcctgt gtcatgaagg ccgagtaact
                                                                      900
  ggagctgctc tcatccctcc accaggaggg acttcactta catctttggg ccaagctgct
                                                                      960
  caatgaaccg ccaggaactg acctgctgac tgcactctgc caggcttccc aatgctttca
                                                                     1020
  ctcttatcta ccctttggca cttatcttgc ttatcaacat aataatttat acacttctaa
                                                                     1080
                                                                     1118
  <210> 1503
```

<212> DNA <213> Homo sapiens <400> 1503 gtcttagcag aggtgattac agcagcagtg agggccgtag atggggaagg agcgcccgct 60 ccagagagca gcggggagcc ggctgaggac gaaggcccca cggacacagc ggaggccggt 120 agtgatecte aageegaaca getgetggaa gageaggtge eetgtggaac ggeacatgag 180 aagggcgtcc ccaaggccag aagtgaggct gcagaggctg gaaatggcgc cgagacaatg 240 gcagcagagg cagaaagtgc ccaaaccaga gttgctcctg ccccagctgc cgcggatgct 300 gaagtggaac aaactgatgc agagtctaaa gacgctgttc ccacagaatg atgctcattt 360 ccctgttcca gggaaggcgt tgggatgatg gatgcgttgg tctttctccc ttggtttgta 420 agcagtacaa gggcgtgtgc tcccagaata tgctgtaatc taattttggt gaagagaccc 480 agegttteet eetgageagt geeteteacg gettgtetea tgeagtegtg tggettettg 540 cccaggtttc aaagctgaag tacattgtcc ttagcggctg taacatgtct cttgacagta 600 gtgcacttgg aataataaag gttgggtgat tatatcttga tgatacatta cttgttcaat 660 acagccactg atggaatgct tcctttttta ttttttcct taatttttt ttttatttgg 720 ttgggaacag ctgaatacta ggaatatatc ttgctctata gaggattttt ttttgtatgt 780 ttcaagcttc agcctttaac ctataccttt gtagtgcacc atatggtgtg tgactttcac 840 aggacttcgc agcacctggt tcacaagtgg cactgaccgc gtcacatcca cgcactccca 900 aaggccagaa gtatctgacc gacctacgcc actggaaaca cacccaccgc aacctcaaga 960 accagactgt gcagagggca ttgcgtccca atctttagtc cttgctgaat cagttctcta 1020 atattttacc tcatttgtgt tccacctcta gattacttca ggtttttttc ctttaaaatt 1080 agttactacc actcaaatgt atttacaaag agaatttggc caggcacggt gatgcatacc 1140 tataatccca gcacttgggg aggccgtggt gagaggatag cttaagccca ggagttcaag 1200 accaacctgg acaacatagc aagaccccat ctcttaaaaa aaaaggaaag aaaacttgat 1260 gtgattgcca taggtggaat aatccaacat aaattgccat agatagaagg tatctgtaat 1320 atatatatat atataaaatg aaatatatgt ttcattttag agaaataact attactttag 1380 atctttccaa atctgagaaa gggaggctag catgtgttca aggttagcac gcaacagaat 1440 ttcctaaaat cagaagaatt ggaagatcct ccccttttga aatggccctg ctgtgtcagt 1500 ttccctgtgg ccttttgaac tgtacatctc acatgttggg aaacgctggc cactgggaaa 1560 tcattagaaa ggaggctgta gaatatttgc cgagcctcta ctgtatacca ggggctaact 1620 caccaagcac attctaggaa ttgggccctg ctcatgagga gccttagtgg agattccagg 1680 tgaatattta tgaaaaagtc aacattagaa ctgaaaatgg aaataaactg cttgaaaaga 1740 1769 caaaaaaaa aaaaaaaaa aaaaaaaaa <210> 1504 <211> 1149 <212> DNA <213> Homo sapiens <400> 1504 tegacecacg egteeggtt acagageaag acteegtete aaaaaacaaa caaaaaaaga 60 ttgaagtaat gaattttatt tcagtggtat ggggaacctt gtttctgaca gtaggggaag 120 ctatcatgtt cctggtagga ggttgcatct tatttcaagc ggtgggaaaa caggacctgg 180 ctttgcatta gtaactgaag ccaggtggtg aactctcagc atgtgtaagg agccggctga 240 gaaggagett tgeteceatg atattaaatt atetgattat tgaaaaettt tgtaaatggt 300 cattagtgag caaattgtct ttttaaaaat tctattatga aagagtttta aacttaacag 360 aaaataggca agaacagtgc caagaactcc tgtacactcc tttgcccaga gactattcct 420 ttagagcaaa ggctacagcc cagaatcacg cgcttcaccc cattcatcac agctctcctt 480 tetgtecate tggtgccact cetcagtttt cetgaactte egegattttg gegtttgtgg 540 aggttatagg ctgatcattt tgtagaatgt ctttcaatgt ggattcgttg atgtttctgc 600 atgattagac cccacctgtg tgtacttgaa gcctgaatgt cacagactct gttcttttta 660 tectattetg tgtetttetg tecagttaet ggtgaggtta etgetgtege ettgaageae 720 aaggtgttet gggtttgtet tgttttttea tgaceetgta aetggeeaca tetteaagga 780 gcgctgcttc catatagtgg aggggggtgt ttggaaatga gatctggttg ctggtgtgcc 840 tatttccact agggtattgc agctcccaga ccttctcata ggatagagct aggggacttg 900 tacatttata gttatttctg tatctgcgtc atatatcatg ttcacacaaa tgcatctaat 960 tccaatctaa catcacagag ttgtctttta aaaatatgac aagctggcca tgcgtgatgc 1020 tcacgcctgt catcccagca ctttgggagg ccaaggcagg cggatcacct gaggttggga 1080 gtttaagacc agcctggcca acatggagaa acctcgtctc tactaaaaaa aaaaaaaaa 1140 1149 ggcggccgc

```
<210> 1505
<211> 1281
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (29)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (47)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (83)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (121)
<223> n equals a,t,g, or c
<220>
 <221> SITE
 <222> (133)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (154)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (1166)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (1262)
 <223> n equals a,t,g, or c
 <400> 1505
 cacgacaggt ttcccgactg aaaagcggnc agtgagcgca accccantta atgtgagtta
                                                                         60
 geteacteat taggeaceee agnetttaca etttatgett eeeggetegt atgttgtgtg
                                                                        120
 naattgtgag cgnataccaa tttcacacag gaancagcta tgaccatgat tacgccaagc
                                                                        180
  tctaatacga ctcactatag ggaaagctgg tacgcctgca ggtaccggtc cggaattccc
                                                                        240
  gggtcgaccc acgcgtccgg gaggcagagg ttgcagtgag ccgagattgc gccactgcac
                                                                        300
  tccagcctgg gtaacagagc aagactccat ctcaaaaaaa gaaagaaaga aaaaagaaag
                                                                        360
  tacaagttta taaagtatta tagtgaaaaa ttcgcattct ggctgatttt aagccattta
                                                                         420
  aaatttatat aaaacaacct tccataaaaa tttgacaggt gcccagatgt tgctttctcc
                                                                         480
  atttattttt tgttttttt taatcacagt aggtctgata gagaattgga gctaaattat
                                                                         540
  aatatttttg ttggtaaagt tgagttatat acttgtacat acaatggaaa tgcttttagt
                                                                         600
  agtgattatt tagcaatttt tgtttttgtt atattaggca tgtttggagg ctttcctatt
                                                                         660
  ctagcattta aatttaaatt ttattaaaat taaataattt aaatctagca tttaaattta
                                                                         720
  aataatttaa gtctagcatt tacttttaaa taattataat gaagttttga aatactaagt
                                                                         780
  taatccagac ctttagttgt cccatggtgt taataaagtt gccaaagaag atgtattatg
                                                                        840
```

```
aacaattcag caataagaca attgtcaaca cagttgagaa taacaatggt aatcgttagt
                                                                    900
aatatttaga attggaattt gcctactgaa atagttatag atgattactt gtgatgtgaa
                                                                    960
actgaattga gcatgacaac cagacatttc cagttggttt tgtaagtttt gagaatctag
                                                                   1020
atactgggtt ttattttttg aaagattagc tctgtttgta agggctgatt ccttgaaaat
                                                                   1080
gtaattttcc agaaaaacac ctaaagaaaa taaaacatgg acatgcctag taaaaaaaaa
                                                                   1140
aaaaaaaaa aaaaaggggc ggccgntcta gaggatccaa gcttacgtac gcgtgcatgc
                                                                   1200
1260
                                                                   1281
tngtgactgg gaaaaccctg g
<210> 1506
<211> 1149
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1138)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1139)
<223> n equals a,t,g, or c
<220>
 <221> SITE
 <222> (1140)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (1143)
 <223> n equals a,t,g, or c
 <400> 1506
 cggggcaacc actataggga aagctggtac gcctgcaggt accggtccgg aattcccggg
                                                                      60
 tegacecacg egteegeege ggggtetgtg etgagaataa tggceeggtt ggeeegggae
                                                                     120
 gagtggaatg attaatgatg ttttgcagca gttttctacg tctgaaattt tttatgtctc
                                                                     180
 tggaaccyag aatttgctaa gagatggagg aacctcagaa aagctatgtg aacacaatgg
                                                                     240
 accttgagag agatgaacct ctcaaaagca ccggccctca gatttctgtg gtcctgctcg
                                                                     300
 tctatcactg gagcagcagg gaatctgaac acgacctcct ggtccacaag gctgtggcca
                                                                     360
 aatggacggc ggaagaagtt gtcctctggc tggagcagct gggcccttgg gcatctcttt
                                                                      420
 acagggaaag gtttttatct gaacgagtaa atggaaggtg aggagcaaag tcttctgaca
                                                                      480
 caccgtggac attttagaaa acagctttct tgagatataa tccaggccag gcgcggtggc
                                                                      540
 tcacacctgg atcccagcac tttgggaggc cgaggcggat cgatcatttg aggtcaggag
                                                                      600
 ttccagacca gcctgaccaa tatgatgraa ccccatctct actaaaaata caaaaaaaaa
                                                                      660
 aaattggcca ggcttggtag tgcacacctt gtaatcccat ctattcggga ggctgagaca
                                                                      720
 ggagaatcac ttgaacccaa gaggtggagg ttacaatgag ccaagatcat gccactgcac
                                                                      780
 tccagcctag gcaacaaggc aagactccat ctcaaaaaga gagagagag gatgtaatct
                                                                      840
 acataaaatt cacacgtttg aagtgcacaa tccatggttt ttaatgtgtt cacaaatagt
                                                                      900
  gtgattatca ccacagetgg ttttagaaca ttttcatcac cctaaaagaa agettttacc
                                                                      960
  cttcagtcaa tcctcatttc tccccaaccc ccagcccctg gcaaacacca ttctactttc
                                                                     1020
  tgtctttatg gatttgtcta ttctggacgt ttgatataaa tggattcata caaaaaaaaa
                                                                     1080
  aaaaaagggc ggccgctcta gaggatccaa gcttacgtac gggtgcatga accgaacnnn
                                                                     1140
                                                                     1149
  tanccggac
  <210> 1507
  <211> 1869
  <212> DNA
  <213> Homo sapiens
```

| <400> 1507 | 60 |
|---|------|
| gcccacgcgt ccggcctcag cctcccgagt agctgggact acaggcgtga gcaccatgcc | 120 |
| cggcctcaac gatattgatt ctttgggctg tagtcagtat tggattatga tcaatattat | 180 |
| caccatttat tttgttgctc cagttcttcc agctgtggcc aatccttcag ttggattctt | 240 |
| gtgcccatc aacattctcc atcctggctt tttgttttga gcacttcctt ccttcctagc | 300 |
| accaccagge tettgtatta tecetgtee tgeeetggaa tegaeteete etceagagag | 360 |
| ccctggtttc ttttgttaga ggatggtata tagaatccaa catgcagaca cttggtggga | 420 |
| cttattgtta ctggggtttt gttatactag ggtttcagtg gtcagtgcta gtatttatgt | 480 |
| atgttaaccc acgctgtgct ttggattcag gctattcaa attttagata atatggtaca | 540 |
| tatattatta ataccactag ttactacatt ggtacttttc aagcaaaata tatctaagtg | 600 |
| ggatcaaatg agactgtaaa tagctttaca tcagttcagg tcagttatgt tgctaaatta | 660 |
| cttttggcat taagtttagg gaaaaaaaat tgggtttggg attttttggt ttcaacattt | 720 |
| gtgattgaga gactatggac ctgtaataag tccaagaaca gcagttgcag tgtaacagga | 780 |
| ctgttaatgg aatcgggtca tttagaaaca gtcaagactt cgctgttgtg catgtggtta | 840 |
| ggagccagtg cacacgtcag ttcttaggaa atgtacagtc tgagcaatag catttgaaat | 900 |
| ccaagactct tcccattgtg ttgctgttga gtgtagaaaa taaaatgtgt gaatttcttt | 960 |
| atcttgagta ttgagattct ccccttagaa taaaacaaga atttttctct cagtgtaaaa | 1020 |
| attitigagia tigaggitti attititiga aatgaatagc aaagttaagc ttaaaaacgt gaacagcttc | 1080 |
| agaactataa atgggtatgt atacetttet getgtetaag ggcagagaag ggaaagaaag | 1140 |
| tgtggtgctt atcagaggag acagcagcaa gacacattgt gacagaaaac caagggtatc | 1200 |
| ctgtgtcaca gtgaaatgta atgagggcac ctctcctttc aagagacgaa gattgaatac | 1260 |
| atgggaagca cacteteege tgtgtgttgt etaggagagg tgcaceetgt atggaaatat | 1320 |
| ttgggaagt taagattaag acagggtaaa ataaagcaaa ggcaaatcac aaagcaaggg | 1380 |
| ctaatgttaa tatgaaaagt gcagaattca aggaaaaagc atggggacaa agaagatttt teetetttt ggttgetgtt catgtgtage etacaacaga actataagac etatagacat | 1440 |
| tectetttt ggttgetgtt catgigtage etacaacaa tgtaaaaagee aatagaaate ttatatgaat atttatttga aaacgtataa tatcaaacaa tgtaaaaagee aatagaaate | 1500 |
| ttatatgaat atttatttga adacgtataa tattadatad tagtatagga tattagttaat tatttgctga tcagataatt gaatgtatag aaactagcag tttgaaagtg attagttaa gttgattaa | 1560 |
| tcagataatt gaatgtatag adactagtag tttgadagtg gattaataaa gttgatttaa tcaagcagaa aaataagcat atgaaagata tttaaaatgg gattaataaa gttgatttaa | 1620 |
| cagatectat tecatgteet tigaatattt atagaaatta aatggaacaa attagggeat | 1680 |
| cagatectat tecatgteet tigatatte atagatatet datagatatet datagatatet atagatatatat atagtgtagta caggaaaact atacaaaagt etttaccaaa aaagggaaat atatatatat atgtgtagta | 1740 |
| caggaaaact atacaaaagt ctttactaaa dddgggaada datatatatgcc tatatgtaca ctacctatat atatacataa tatatagtac tgcttaata tatatatgcc tatatgtaca | 1800 |
| catatatata tacatgtata ggcagtacta tgttttctga tcataatatg ttaaattagt | 1860 |
| | 1869 |
| aaaaaaaaa | |
| <210> 1508 | |
| <211> 1867 | |
| <212> DNA | |
| <213> Homo sapiens | |
| • | |
| <400> 1508 | 60 |
| gccacgcgt ccggcctcag cctcccgagt agctgggact acaggcgtga gcaccatgcc | 120 |
| cggcctcaac gatattgatt ctttgggctg tagtcagtat tggattatga tcaatattat | 180 |
| caccatttat tttgttgctc cagttcttcc agctgtggcc aatccttcag ttggattctt | 240 |
| gtgcccatc aacattctcc atcctggctt tttgttttga gcacttcctt ccttcctagc | 300 |
| accaccagge tettgtatta tecetgteee tgeeetggaa tegaeteete etceagagag | 360 |
| ccctggtttc ttttgttaga ggatggtata tagaatccaa catgcagaca cttggtggac | 420 |
| ttattgttac tggggttttg ttatactagg gtttcagtgg tcagtgctag tatttatgta | 480 |
| tgttaacca cgctgtgctt tggattcagg ctatttcaaa ttttagataa tatggtacat | 540 |
| atattattaa taccactagt tactacattg gtacttttca gcaaaatata tctaagtggg | 600 |
| atattattaa taeedasaa getttacate agttcaggtc agttatgttg ctaaattact | 660 |
| tttggcatta agtttaggga aaaaaaattg ggtttgggat tttttggttt caacatttgt | 720 |
| gattgagaga ctatggacct gtaataagtc caagaacagc agttgcagtg taacaggact | 780 |
| gttaatggaa tcgggtcatt tagaaacagt caagacttcg ctgttgtgca tgtggttagg | 840 |
| agccagtgca cacgtcagtt cttaggaaat gtacagtctg agcaatagca tttgaaatcc | 900 |
| agactette ceatigigti getgitgagi gtagaaaata aaatgigtga attiettat etigagiatt gagattetee eetiagaata aaacaagaat tittetetea gigtaaaaaat | 960 |
| gtcaagtttt attcttgaaa tgaatagcaa agttaagctt aaaaacgtga acagcttcag | 1020 |
| gtcaagtttt attcttgaaa tgaatagcaa agttaagee dadadaggg aaagaaagtg aactataaat gggtatgtat acctttctgc tgtctaaggg cagagaaggg aaagaaagtg | 1080 |
| tggtgcttat cagaggagac agcagcaaga cacattgtga cagaaaacca agggtatcct | 1140 |
| gtgtcacagt gaaatgtaat gagggcacct ctcctttcaa gagacgaaga ttgaatacat | 1200 |
| gtgtcacagt gaaatgtaat gagggtatet ettettedd gagatgtass gggaagcaca eteteegetg tgtgttgtet aggagaggtg caccetgtat ggaaatattt | 1260 |
| gggaagcaca ccccccgccy cycyccycco waawaaaaa carring | |

```
gggaaggtta agattaagac agggtaaaat aaagcaaagg caaatcacaa agcaagggct
                                                                     1320
                                                                     1380
aatgttaata tgaaaagtgc agaattcaag gaaaaagcat ggggacaaag aagatttttc
                                                                     1440
ctctttttgg ttgctgttca tgtgtagcct acaacagaac tataagacct atagacattt
                                                                     1500
atatgaatat ttatttgaaa acgtataata tcaaacaatg taaaagccaa tagaaatctc
agataattga atgtatagaa actagcagtt tgaaagtgat tagttcatta tttgctgatc
                                                                     1560
aagcagaaaa ataagcatat gaaagatatt taaaatggga ttaataaagt tgatttaaca
                                                                     1620
                                                                     1680
gatcctattc catgtccttt gaatatttat agaaattaaa tggaacaaat tagggcatca
ggaaaactat acaaaagtct ttaccaaaaa arggaaawat atatatata gtgtagtact
                                                                     1740
acctatatat atacataata tatagtactg cttatatata tatatgccta tatgtacaca
                                                                     1800
tatatatata catgtatagg cagtactatg ttttctgatc ataatatgtt aaattagtaa
                                                                     1860
                                                                     1867
aaaaaaa
<210> 1509
<211> 1156
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (11)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (942)
<223> n equals a,t,g, or c
<400> 1509
ctggaaaacg nctcactata ggttaaagct ggtacgcctg caggtaccgg tccggaattc
                                                                       60
                                                                      120
ccqqqtcqac ccacgcgtcc ggagaaactt cagcctttct aagttgatag catgtttatt
                                                                      180
aacttttaga taaagatcct tatagactga aagaatgtag cctctgcatt aatggtaaat
ggtctagaag ttttcgtttc cactgaggct tccgccactc gcttttttaa acttcctgct
                                                                      240
                                                                      300
atggtttgga tatggtttgt cctcaccaaa actcatgctg aggcctgagt ccccagtttg
attgtgttgg taggtggtgc ctttaagagg tgattaggtc attgagatgg attaaaggct
                                                                      360
ttctcatgag gctcagttag ttctggaatg gattcgctct tgcaggaatg gatgaattct
                                                                      420
cacaagagtg ggttgttatg aagtgaggat gcttcttgtg ttctgttctc tttgccctcc
                                                                      480
tcagttcacc atctgctttc caccatgagt tgaagcagca tgaggccctc atcagatggg
                                                                      540
ctccctgatc ttggactcct cagcctttgg actcataagc caaaataaat ctgttttctt
                                                                      600
tataaattgc ccagtctcag gtattctgtt atagcaaaaa aaaaaagtgg attgagatac
                                                                      660
ttttttgctc tgctacttac ctctttwcca gaatctttta aggacttgat gtaggaactg
                                                                      720
agctatttag tragtcrttg gtwgaagttw mcgcactgta ctttgaaaat taagtgaaag
                                                                      780
cagaaaagtg agtgcgtatg taaggaaaat aatagtaaaa gaacgctttg acttcttagc
                                                                      840
actogocoto tootgtatat coccaggoac ottoagttgt otggaacaaa gaatgtagga
                                                                      900
aaaactgaag aaattcagaa cagttaccaa tgacaaaaat cnctgatcag aataaaaaga
                                                                      960
caaggttaca gaatatacgt tgytactgat catttttcag aagcagaagg aaaagaatgc
                                                                     1020
                                                                     1080
cctccctggc cattgagggt gataaaaagw aagccccact cctatcacag gcaatgaagg
                                                                     1140
acagggatgg aaaaaaaaag tgaagaagaa ggggaaaaag caaaagttat gaaaaaaaa
                                                                     1156
aaaaaagggc ggccgc
<210> 1510
<211> 1472
<212> DNA
<213> Homo sapiens
<400> 1510
                                                                       60
ggagggcaac cctgggccac ctgcggaccc ggatggcggc cccaggccac aagccgaccg
gaagttccag gagagggagg tgccatgcca caggccctca cctggggctc tgtggctcca
                                                                      120
ggtggctgtg acaggggtgc tggtagtcac actcctggtg gtgctgtacc ggcggcgtct
                                                                      180
gcactagtga agccctgggc tcttcccacc acccatctgt tccgttcctg cagtayacct
                                                                      240
                                                                      300
ggcccctctc cgaagcccct tgtccctttc ttggggattg tggargctgg gtcagarggg
                                                                      360
```

arttaaggga ctgcaggcct ggcagcarga catgccttgg ctgaaccaag tcctgagagc

```
420
agcatctctg tccccacggt gccttgtgtg ggtccccgtc cttggctttc tgggtcctgg
gctgccccca gtgctccaga ccttccccac tggcaatcca ggttatcatc catgtcctcc
                                                                      480
                                                                      540
agaggagett cetectecag geeteageee tgttggeeea ggtggageag gagggaeeae
tggaacatgt ggtgcttggg aatgcctctc ctgttgcatt ggtccctgaa ggcctcaggg
                                                                      600
caggtatgtg gtgtgtgggc gactccacaa gacctgcctc ccatcctggc agcccagcct
                                                                      660
gagaccgttg cattgaggca ggcaggagcg gcagggtggc tgctctccag gagcccaact
                                                                      720
gccttgagtt cctgccccac tgggccccct cccctgctgg gcaatcctgg gaaggtctgg
                                                                      780
                                                                      840
aggttcctgt ggacctcagg gaagccaggg gcagctgtca ggcctgagga agacctgtgg
                                                                      900
agetectete cageetecte tttecetece etetggtete cattetette agetecetae
                                                                      960
atgggctggg gaggagacac ctggtgggca gagctcaggc agaggtttgg atttcagctc
                                                                     1020
cctcacttcc ggggctgtgt ggctttggca gatgtcagac ttctggtctt gcttctccaç
gtggacagtg agtatctggc tcattcttca ctgggttctt ctgagattga acctacaggt
                                                                     1080
gtttgccaag tgcctggccc agagcaagtg gccactgctt ctcccatctc tctcctgccc
                                                                     1140
aacctggtag agctgagggc atgagaggca gagtgcacag tggtcaaggg tgcagctctg
                                                                     1200
cagcacagge agectaggee tgegteecaa cetgeetete accagetetg tgacettggg
                                                                     1260
caagggattt atctgtctgt cccttagttt tctcacctgt aaaaggagga taagtatata
                                                                     1320
                                                                     1380
tatatatttc ccagtgttgt gaagattaaa ggagtttatc gatgtaggtc ttaggatgag
                                                                     1440
tcctggcatt taccaagggt tggatatatg ttattatcac tattaagtgt tgagggtcca
ggcatgctgg gcaacaggga ccccatctct ac
                                                                     1472
<210> 1511
<211> 1991
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (231)
<223> n equals a,t,g, or c
<400> 1511
ctctgttctc tggaatgcca tgatccatcc actgtgcaat atgactctga aaggggtagt
                                                                       60
                                                                      120
atggtaccag ggggagtcca atataaatta taacacggat ctgtacaatt gcacattccc
                                                                      180
tgcactcatc gaagactggc gtgaaacctt ccaccgtggt tcccaggggc agacggagcg
                                                                      240
tttcttccca tttggacttg tccagttatc ttcagatttg tctaagaaga nctcagacga
                                                                      300
tggatttccc cagatccgtt ggcatcaaac agcagacttc ggctatgtcc ccaacccaaa
                                                                      360
gatgcccaat actiticatgg cigtagctat ggatctctgt gatagagact cgccttttgg
cagcatccac cctcgagata aacagaactg tggcttatcg gctgcatttg ggggcccgtg
                                                                      420
ctctggctta tggtgagaak aatttgacct ttgaaggacc actgcctgag aagatagaac
                                                                      480
tcttggctca caaggggctg ctcaatctca catattacca gcaaatccag gtgcagaaaa
                                                                      540
                                                                      600
aggacaacaa gatatttgag atctcctgtt gcagtgacca tcgatgcaag tggcttccag
                                                                      660
cttctatgaa caccgtctcc acccagtccc tgaccctggc gatcgattct tgtcatggca
                                                                      720
ctgtggttgc tctccgctat gcttggacca crtggccttg tgaatataag cagtgtcccc
tataccaccc cagtagtgcc ctgccagccc ctcccttcat tgctttcatt acagaccagg
                                                                      780
gtcctggaca tcagagcaat gttgctaaat gactgtttca gtatgatcag aacttagata
                                                                      840
taaggatggg tccttcagat tttagcattt aggagtttca ataataacca ttgcttttaa
                                                                      900
aggaaattaa tagaaagcct cattgaatgg ctttcagcta gcacatggct gtttctatat
                                                                      960
                                                                     1020
tctgatgagc ccaggctyat aggtaacttg aaatgcttgc tttttgttcc ctagttggtc
taagggtctg tattggacta attctgaact acagacaaat tggacctcaa tgtcatttat
                                                                     1080
ttccctcata ttaatgggag tgaaatgtct aatacttttg ccccttttta tccagagttg
                                                                     1140
                                                                     1200
tgggatctca ggattggaag agattttaaa ggccacatag gccagctagt gttcatgtgt
                                                                     1260
tctttataaa atttctccca tccaagtact aaccaggccc gaccctgctt agcttccgag
atcagatgag atcaggcgcg ttcagggtga tatggccgta gacgtcttta caaaattcct
                                                                     1320
gacaggtggt tactgaatct ctctatgaac tttccattca aaactttcca agtttttcct
                                                                     1380
tatgtggaac cgaaatcttt ctttctcccg tgaaacttta ctactatcag ataattgaag
                                                                     1440
acagatetet ttgtattete tteaageeea aaceaattet gtteetteaa tetaaatagt
                                                                     1500
ggtaatatga atgtttaaga aatgaaataa gaaacatgtg caggcacttt ggaaggtgct
                                                                     1560
                                                                     1620
aagtgactgc cctaaggaat gaaaagcaag ggccaggtgg gagtagccca gcgaaggcac
                                                                     1680
ttgggctgcc aggaacagga ggcgtgggaa actctggctt aggaaaacat gaacacaggg
                                                                     1740
gcaacagagg caaactgttg ttcgagttaa atataaatct caggctcttt aaaggtaaaa
                                                                     1800
ggtttaagga taatccattt ggaagaagaa aagagtgagg ctgaaagtaa agccacatga
```

```
1860
caaqcatata aaaaaaaatg cagatgatac aaatatgaaa gaggccttca gtgtttgttt
                                                                    1920
attaaqaatc ttaatqcagt ttactgatgg attaaaaaca gctaacattg tctgaaaatt
atgttaccta taagaagttg gaaataaata aaagcataat cactaaaaaa aaaaaaaaa
                                                                    1980
                                                                    1991
aaaactcgta g
<210> 1512
<211> 1994
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (231)
<223> n equals a,t,g, or c
<400> 1512
                                                                      60
ctctgttctc tggaatgcca tgatccatcc actgtgcaat atgactctga aaggggtagt
                                                                     120
atggtaccag ggggagtcca atataaatta taacacggat ctgtacaatt gcacattccc
                                                                     180
tgcactcatc gaagactggc gtgaaacctt ccaccgtggt tcccaggggc agacggagcg
                                                                     240
tttcttccca tttggacttg tccagttatc ttcagatttg tctaagaaga nctcagacga
                                                                     300
tggatttccc cagatccgtt ggcatcaaac agcagacttc ggctatgtcc ccaacccaaa
                                                                     360
gatgcccaat actttcatgg ctgtagctat ggatctctgt gatagagact cgccttttgg
                                                                     420
cagcatccac cctcgagata aacagaactg tggcttatcg gctgcatttg ggggcccgtg
                                                                     480
ctctggctta tggtgagaak aatttgacct ttgaaggacc actgcctgag aagatagaac
                                                                     540
tcttggctca caaggggctg ctcaatctca catattacca gcaaatccag gtgcagaaaa
                                                                     600
aggacaacaa gatatttgag atctcctgtt gcagtgacca tcgatgcaag tggcttccag
cttctatgaa caccgtctcc acccagtccc tgaccctggc gatcgattct tgtcatggca
                                                                     660
ctgtggttgc tctccgctat gcttggacca crtggccttg tgaatataag cagtgtcccc
                                                                     720
tataccaccc cagtagtgcc ctgccagccc ctcccttcat tgctttcatt acagaccagg
                                                                     780
gtcctggaca tcagagcaat gttgctaaat gactgtttca gtatgatcag aacttagata
                                                                     840
taaggatggg tccttcagat tttagcattt aggagtttca ataataacca ttgcttttaa
                                                                     900
                                                                     960
aggaaattaa tagaaagcct cattgaatgg ctttcagcta gcacatggct gtttctatat
                                                                    1020
tctgatgagc ccaggctyat aggtaacttg aaatgcttgc tttttgttcc ctagttggtc
taagggtctg tattggacta attctgaact acagacaaat tggacctcaa tgtcatttat
                                                                    1080
ttccctcata ttaatgggag tgaaatgtct aatacttttg ccccttttta tccagagttg
                                                                    1140
tgggatetea ggattggaag agattttaaa ggeeacatag geeagetagt gtteatgtgt
                                                                    1200
tctttataaa atttctccca tccaagtact aaccaggccc gaccctgctt agcttccgag
                                                                    1260
                                                                    1320
atcagatgag atcaggcgcg ttcagggtga tatggccgta gacgtcttta caaaattcct
gacaggtggt tactgaatct ctctatgaac tttccattca aaactttcca agtttttcct
                                                                    1380
tatgtggaac cgaaatcttt ctttctcccg tgaaacttta ctactatcag ataattgaag
                                                                    1440
                                                                    1500
acagatetet ttgtattete tteaageeea aaceaattet gtteetteaa tetaaatagt
ggtaatatga atgtttaaga aatgaaataa gaaacatgtg caggcacttt ggaaggtgct
                                                                    1560
                                                                    1620
aagtgactgc cctaaggaat gaaaagcaag ggccaggtgg gagtagccca gcgaaggcac
                                                                    1680
ttgggctgcc aggaacagga ggcgtgggaa actctggctt aggaaaacat gaacacaggg
gcaacagagg caaactgttg ttcgagttaa atataaatct caggctcttt aaaggtaaaa
                                                                    1740
                                                                    1800
ggtttaagga taatccattt ggaagaagaa aagagtgagg ctgaaagtaa agccacatga
                                                                    1860
caagcatata aaaaaaaatg cagatgatac aaatatgaaa gaggccttca gtgtttgttt
                                                                    1920
attaagaatc ttaatgcagt ttactgatgg attaaaaaca gctaacattg tctgaaaatt
                                                                    1980
1994
aaaaaaaaa aaaa
<210> 1513
<211> 712
<212> DNA
<213> Homo sapiens
<400> 1513
cccccgggct gcaggaattc ggcacgagtt cgcctcaccc tccccagtgc actgaagaag
                                                                      60
gtaaccgggt ccagacccac gcggcgccag ttctccggcg ggaaggaaaa ccgcgcagag
                                                                     120
aggcagcaat gaatgtggat cacgaggtta acctcttagt ggaggaaatt catcgtttgg
                                                                     180
gttcaaaaaa tgctgatgga aagttaagcg tgaaatttgg ggtcctcttc cgtgatgata
                                                                     240
```

| ttgtaacata tactgcaaga actggaatat ttgtaaacga atctatgtat aagcaacaag | tccaggagag ttaatgtggt aaagtgaaag aaggagattc gatgctataa caaactgaag | gcattggtag ctgcttctgc ttacatatct aacaaacatt atgttttaga aataattaga accaactcct tttaaaaaaa | aaggtgttca ttatgtactg tgaacatact agtctgtcct cattttctat atgagaaata | tgatgatgtt ccattttttg taatgtattt tttttatatc agatatttga ttatgatgtt | gacattatat tttctggtaa ttatagaact ttgaaagaaa cattctgcga tatgtaataa | 300 360 420 480 540 600 660 712 |
|---|---|---|--|--|--|---|
| <211> 1514 <211> 486 <212> DNA <213> Homo | sapiens | | | | | |
| tggaagagca cttacagacc gaaaacaagt gaagagagaa ttctcgctga ggttcaggag | gatgagtgca caccaacaac atgataaaaa tggctaaagg ggctggagtc aatggcgtga | agtgttccca gccctcctct caagaagctg gtccaacatc acatgaaaag caatgatgcg acccgggagg cagagcgaga | catcctctct cactggttgg aaaaagaaaa acagttcata atctcagctc cggagcttgc | gtgctggctc tacacactgc aaaaaaccat caaagggaaa actgcaactt agtgagctga | cgaacgettg agcaaacaag agaaacaatt ttcaatgetg ccgteteetg gattgegeea | 60 120 180 240 300 360 420 480 486 |
| <210> 1515 <211> 654 <212> DNA <213> Homo | sapiens | | | | | |
| tccagctccg accgccgccg agaagcattc tgtaccctgt aggaaacgtg atattctatc tgtttttgtc aaaaaatttg ttctaatttg ttgctctagt | ccagcccagg cctctcgcaa aaatctgctt gttttacctt tttcaatcaa acaaacactt ctaatgttgc gaaaaaaaa ctgaatgaag | tcctccctt cgcccttcc tattgcaata tctaccctca aacaacattc aactgaccat attgtatctc tactcccatg tcaggctcat aaaaaaaaa taaataataa | ctggaagccg taggggaaat ttaacaatta tatttgctct gagataaagg tgtaaaatac gcaaagaaaa agcagctact atcttttatt | agcggcttcg gactaatgaa gcagggcact ttgtatattt aaagagatgt aatgtatgta aaaaaagaat gtgtagaaaa tgtgatattt | ctcgcatttc gctaattaaa ggccagagtt aagtgttgta ggcttttgtg tgcatgtaag gaaaaaaaga ttccccctac tcagagacat | 60 120 180 240 300 360 420 480 540 600 654 |
| <210> 1516 <211> 974 <212> DNA <213> Homo | sapiens | | | | | |
| tgggcgacac ttgtcttctc cagtacaggg aggtctcccc tgtctacggc cccaggctgt gagttgaagg cgctttttac gtcctggaac | ttttacgtct ttgctgaatg gtgatggagt gctgcgaaga ccaaacggcc aacccatgtt gatcttagag ctgcacaccc tttcctgcat attgtaggcc | tctagggctt gtcaacatgc cgaaaatcgc gcacatttta ccggggatac | acccgtctgc ttttgttttg cttagcgggg tcactgcagt aaacctgccc gttttcctct ccaacctctt ccgttttctg ttccttcgac gattaaaacc | acgtttctga tcccaagaga ctgaccctgg ttctctccag tggccgctaa gcagtcaaat agcccgagtg gaaacaacgt aatatttatt aatgaagaac | gtccgcacgg tacaggcaag cactccctgt ttacccgccc gcaagcctag cagagattcg agtgaatgta tgattatgta | 60 120 180 240 300 360 420 480 540 600 660 720 |

| | | gaggtcagga | | | | 780 |
|-------------------------|------------|------------|------------|------------|------------|-----|
| accccacctc | tactaaaaat | acaaaaattg | gccgggcttg | gtggcgtgcg | cctgtagtcc | 840 |
| cagctactcg | ggaagctgag | gcaggaaaat | cacttgaacc | tgggaagtgg | aggttgtagt | 900 |
| gagccaagat | tccgcctgca | ttctagcctg | ggcaacaaaa | tgagactctg | tctcagaaaa | 960 |
| aaaaaaaaaa | | | | | | 974 |
| | | | | | | |
| <210> 1517 | | | | | | |
| <211> 472 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | saniens | | | | | |
| \Z13> 1101110 | Supremo | | | | | |
| <400> 1517 | | | | | | |
| | gagtgtcagt | cggctctccg | cacatatcca | caacctcaca | gagcagtcca | 60 |
| | | ccacctgctg | | | | 120 |
| tatgaaggtc | ttgacctgag | aaaaccatct | tggataactg | cagcaaggaa | aaggaaaaat | 180 |
| gcaacaccta | ggagatttca | gtaaacagta | gaatcatgcc | aacctaatct | gtgttaaaat | 240 |
| acttagaata | taggagccgc | tgatgatgcc | tcttatctat | gtgtctgact | gaatcctttc | 300 |
| ttttctcaga | acaacaaaac | aaagcctggg | aaccaggcca | aatgcctgcc | acttacctta | 360 |
| aattgatcag | ccactttgag | attaaaaccc | ctgaaagctg | ccacaccgtg | aaaacaaggc | 420 |
| | | attgcgactt | | | | 472 |
| ccccccaca | ccaaaggcaa | accgcgaccc | - 9 | | | |
| <210> 1518 | | | | | | |
| <211> 924 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | <u>-</u> - | | | | | |
| <400> 1518 | | | | | | |
| ggatttctat | gcattgtgta | atattcagtg | atgttgagat | tttgcatgtt | gttacaggtg | 60 |
| ctctttcata | tgtgtgtttg | tggtgttgat | gtggaattgt | taaccactgc | tgctatcact | 120 |
| tattgtagtt | aaactgaaaa | actgtgttaa | aaggctgtgc | cagtcaacat | ttctatgtgt | 180 |
| gacttaagta | actgtgtact | tcattgttta | atattttgag | ccagcactta | gtggcctcta | 240 |
| cagaaggaaa | tattgtagtt | gtcaaagtgg | tgccaaactt | gaaaatcttg | tgtcatgttt | 300 |
| ataattccag | gccaggtcag | cttttcttca | acactttccg | agctctttga | aagcaaaaaa | 360 |
| catttgcaaa | aagagaaaga | aagcaagaat | tctgaacttt | tctaatactc | tctcctctag | 420 |
| aattttaaat | atttttttct | tttgatgttt | gagtatctta | cagaaaaatc | caatcaaatg | 480 |
| actagcggta | gaatttccct | tgatctggat | atttttaggc | tgaacagtgt | aatagcagag | 540 |
| gactatgagg | tgcatacatt | atttttgttg | gctatcatgg | cttattgttt | gaatttcatt | 600 |
| taataacaat | attcaggctg | gaggtggtga | ctcacacctg | cattcccagc | actttgggag | 660 |
| actgaggcgg | gcggatcacc | tgagatcagg | agttcgaggc | cagcctggcc | aacatgacga | 720 |
| agcccagtct | ctactaaaaa | tactaaatta | gctgggtgtg | gtggctcaca | cctgtaatcc | 780 |
| | | gcaggagcat | | | | 840 |
| 5 5 5 | | cactccagcc | tgggtgaggg | agcaaggctc | caacccccct | 900 |
| aaaaaaaaa | aaaaaaaact | cgag | | | | 924 |
| .010. 1510 | | | | | | |
| <210> 1519 <211> 807 | | | | | | |
| <211> 807 <212> DNA | | | | | | |
| <213> Homo | ganions | | | | | |
| \213> HOMO | sapiens | | | | | |
| <400> 1519 | | | | | | |
| | tttttttt | tttttttc | acaaagattg | acaaaacttt | aataaaagtt | 60 |
| aaatttacag | acatcttaaq | ataacttggg | aaatatgtag | taaaaaagaa | tcgagtccac | 120 |
| | | | | | atctacttaa | 180 |
| ctcatatatt | taatgtggta | atttttctaa | caaaatttaa | tgggggtatg | aatgatatat | 240 |
| ttatgccctt | gacaaagatg | acatgtgtga | ttttgttgtg | actaagaaag | gagagtatga | 300 |
| tttctggtgg | ttatgatatc | actctggctc | atcgaagctc | acagaatatg | taaggttctg | 360 |
| ccacgtccaa | agatgttagg | caaatgtaat | agaaggcgca | ccgggctgac | acacgttttc | 420 |
| atcatacaaa | tcttctggca | gttcctcttc | atctccatca | ggaaaatatg | tagggaatgg | 480 |
| tagatttta | ccgagatcct | tatatgcagg | cagtttagaa | tctttgacct | ttactaagca | 540 |
| atttttatgt | ccaggtacag | agccatttac | atagattatg | ttgtgctttg | tgtttattct | 600 |
| ccacactttc | ccatttttcc | aggcatttta | gttccaggcc | agactctgcc | aatatcacca | 660 |
| | | | | | | |

```
720
gttgcaacag ctccaggtct cctgtgggtt ttcgtttgac catgcgtagc aggctggcct
                                                                       780
ttaaatcccc atctttcat gacaccttga aaacctttac caatagtttt ggctgtgaca
                                                                       807
tccacatact gtcctgtatc tcgtgcc
<210> 1520
<211> 893
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (10)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (18)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (28)
<223> n equals a,t,g, or c
<400> 1520
ggcacgaggn aaaagaancc cgcttcangg ttgccagagt gtgataggta ccccagagtt
                                                                        60
catggcccct gagatgtatg aggagaaata tgatgaatcc gttgacgttt atgcttttgg
                                                                       120
                                                                       180
gatgtgcatg cttgagatgg ctacatctga atatccttac tcggagtgcc aaaatgctgc
                                                                       240
gcagatctac cgtcgcgtga ccagtggggt gaagccagcc agttttgaca aagtagcaat
                                                                       300
tcctgaagtg aaggaaatta ttgaaggatg catacgacaa aacaaagatg aaagatattc
catcaaagac cttttgaacc atgccttctt ccaagaggaa acaggagtac gggtagaatt
                                                                       360
                                                                       420
agcagaagaa gatgatggag aaaaaatagc cataaaatta tggctacgta ttgaagatat
                                                                       480
taagaaatta aagggaaaat acaaagataa tgaagctatt gagttttctt ttgatttaga
                                                                       540
gagagatgtc ccagaagatg ttgcacaaga aatggtagag tctgggtatg tctgtgaagg
                                                                       600
tgatcacaag accatggcta aagctatcaa agacagagta tcattaatta agaggaaacg
                                                                       660
agagcagcgg cagttggtac gggaggagca agaaaaaaaa aagcaggaag agagcagtct
caaacagcag gtagaacaat ccagtgcttc ccagacagga atcaagcagc tcccttctgc
                                                                       720
                                                                       780
tagcaccggc atacctactg cttctaccac ttcagcttca gtttctacac aagtagaacc
                                                                       840
tgaagaacct gaggcagatc aacatcaaca actacagtac cagcaaccca gtatatctgt
                                                                       893
gttatctgat gggacggttg acagtggtca gggatcctct gtcttcacag aat
<210> 1521
<211> 2037
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (22)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (28)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (68)
<223> n equals a,t,g, or c
```

```
<220>
<221> SITE
<222> (1974)
<223> n equals a,t,g, or c
<400> 1521
gttcccgggt caagaatggc cnaacctntt tacccagagg agatytacgg taactgragt
                                                                       60
ctgccctnga acacctytca tatttggcac ccacggatac ggraggtggg tttgcatgtc
                                                                      120
                                                                      180
cagggtgcaa tcatggtgtc cagcgtggtg raggtggtga ttggcctgct ggggctgcct
ggggccctgc tcaactacat tgggcctctc acagtcaccc ccactgtctc cctcattggc
                                                                      240
ctttctgtct tccaagctgc tggcgaccga gctggctccc actggggcat ctcagcttgg
                                                                      300
tgagcaggca ccaggcctga tccctgccca gccccagcac cctaccctct tcatgtcctt
                                                                      360
ggtccttctt cccggctcct ggccccagcc tggcctccca tccacttcct gattgtgcct
                                                                      420
ctgccccag ctccattctc ctgatcatcc tcttctccca gtacctgcgc aacctcacct
                                                                      480
tcctgctgcc tgtctaccgc tggggcaagg gcctcactct cctccgcatc cagatcttca
                                                                      540
                                                                      600
aaatgtttcc tatcatgctg gccatcatga ccgtgtggct gctctgctat gtcctgacct
                                                                      660
tgacagacgt gctgcccaca gacccaaaag cctatggctt ccaggcacga accgatgccc
                                                                      720
gtggtgacat catggctatt gcaccctgga tccgcatccc ctacccctgt cagtggggcc
                                                                      780
tgcccacggt gactgcgctg ctgtcctggg aatgttcagc gccactctgc aggcatcatt
gagtccatcg gagattacta cgcctgtgcc cgcctggctg gtgcaccacc cccactttgg
                                                                      840
                                                                      900
tttagcccca ccctgtcttt gagaggcctc gcccccgcat caagccccag ccggtttatg
                                                                      960
cctcgctctt ataacaggcc ccgccctgg aactaacccc gccccagcct cgtccccagg
                                                                     1020
tctagcttcc ccgctggctc cccggcaggt gggcagccgg cgcgtggtgc agtatggtgc
                                                                     1080
ggctatcatg ctggtcctgg gcaccatcgg caagttcacg gccctcttcg cctcgctccc
                                                                     1140
tgaccccatc ctggggggca tgttctgcac tctctttggc atgattacag ctgtggggct
                                                                     1200
gtccaacctg caatttgtgg acatgaactc ctctcgcaac ctcttcgtgc tgggattttc
                                                                     1260
catqttcttc gggctcacgc tgcccaatta cctggagtcc aaccctggcg ccatcaatac
                                                                     1320
agggagccca gaggagcgtg gtctgataca gtggaaagct ggggctcatg ccaacagtga
                                                                     1380
catgtcttcc agcctcaaga gctacgattt ccccattggg atgggcatag taaaaagaat
                                                                     1440
tacctttctg aaatacattc ctatctgccc agtcttcaaa ggattttctt caagttcaaa
                                                                     1500
agatcagatt gcaattccag aagacactyc agaaaataca gaaactgcat ctgtgtgcac
caaggtctga aaaatgactt ycaggaaagg aagcatggta tataacagga aaagaaaact
                                                                     1560
acatggggaa ccagaagacc taagcctgaa atcccagccc tgcccctaac taacttctgt
                                                                     1620
gtaaactcag ataagtcacc tttctctggg attcaaattt ttgcatcagt taaaaaaaaa
                                                                     1680
ggggtggggg ggaatgggcc aaagtctgag tcttagagac ttgtaccaat gttatgctat
                                                                     1740
gtctctaaat ctttactctc ctaagtagac ttgtcagcat ctaggaagaa cagctagaaa
                                                                     1800
ttttcctctg tgatatttta gactgcaagt tgaaaaaaaa waamaaraaa tgagggcagg
                                                                     1860
ttccagggcc tgaaatgtag gtatgctgca aggcttttac attgaatttg accctacatc
                                                                     1920
acttcaagac taatgcataa tattaaacat catgttgaag aaataatttt agtntcgtaa
                                                                     1980
tttatacata gcagtttctt tggacaggat atattctccc ttcccccaag ggaaata
                                                                     2037
<210> 1522
<211> 1417
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (510)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (696)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1363)
<223> n equals a,t,g, or c
```

```
<220>
<221> SITE
<222> (1389)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1394)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1417)
<223> n equals a,t,g, or c
<400> 1522
gggcacgagc ggctgtggtg gttcccgcag agtggataaa gaactgggag aaatcaggga
                                                                      60
gaggcgaatt tttgcattta tgtcggatcc tcagtgaaaa taaaagccat gatagttcaa
                                                                     120
                                                                     180
catacagaga tttccagcaa gctctctatg agttgtcata tcatgtaatt aaaggaaatc
taaagcatga acaggcatct aatgttctta gtgacattag tgaatttcgt gaggatatgc
                                                                     240
                                                                     300
cctccattct tgctgatgta ttctgcatat tagacattga gacaaattgt ttagaagaaa
                                                                     360
aaagcaagag agactatttt acacagttgg tattagcatg tttgtattta gtttcagaca
                                                                     420
cagttctaaa ggaacgcctg gatccagaaa cactggaatc attagggctt atcaaacaat
                                                                     480
cacagcaatt caatcaaaag tcagttaaaa tcaagacaaa actcttttat aagcagcaaa
aattcaattt gttaagagaa gagaatgaan gttatgccaa gctgattgct gaattggggc
                                                                     540
                                                                     600
aagatttatc tggaagtatt actagtgatt taatcttaga aaatatcaaa tctttaatag
gatgctttaa tctgggatcc caataggagt tttgggatgt cattttagaa gtgtttgaat
                                                                     660
gcagaccagt aatgtacttt ctgtctctgt gatttngcct gttttggaca tttcatttaa
                                                                     720
atggaattat gcaataattt gtggcctttt gtgtttggct ttcacttagc atcatgttct
                                                                     780
caaggeteat ceatgttgtg geatgtatea gtactgeatt cetttttatg getaaatgat
                                                                     840
gtttcattgt atgagtgtgt accacatttt atttatccat tcagcaatta atggacagga
                                                                     900
acaatggctt ttaagtatta aattgtaagt tcaacattaa atgtatycac agttattgat
                                                                     960
                                                                    1020
aatatcaaga ttatacatgg tgtgaacaga atgctgtgtc gaaatggtat gtaaattatt
                                                                    1080
tgtcagcatt tcatgtaagt gattattttc taaggaccct tctagccctg gttttaagaa
                                                                    1140
atatgtgaat gtagtatttt catcaataaa gtttaatgca ttaagcatta gcttaaaatt
tgaatgaagg cagatgtgaa gatatttgcc acatgttgta ataatcatgt tttgaaatta
                                                                    1200
tttcaatatg aagtatttga aaaatgtcaa tacataaagg aaaggaaatg agtataatta
                                                                    1260
agtcaatata tttttaaagc aatttttata atttagcaga cactgcatct taatataagt
                                                                    1320
1380
                                                                    1417
acccaattng ccgnataggg agtcgtatta ctttcan
<210> 1523
<211> 1837
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1697)
<223> n equals a,t,g, or c
<400> 1523
                                                                      60
aattgccata tacttctcac ccagtttctc ctaatgttaa tattttatat aaccatggca
catttatcaa aactagaagt gaatattagt aatgttacta ttaactatgg gctttattca
                                                                     120
gattttacca gtttttctgc tagtgtactt tttctattcc agggtccaat ctaaaatccc
                                                                     180
acattgcatt tagtttgtgt gtattttctt tctttattat tattttttt ttggtaatta
                                                                     240
                                                                     300
agttttttaa aaaggtcata gactataggg atttcattta caagaataat atcttcagca
                                                                     360
tatggccctt tcctgatatg tctgactaat gggtttctaa aatgtatttg cagagattgc
                                                                     420
cttgcaacag gtttccatgt tcttccgatc agaaccaaag tgggaggtgg tggaaccttt
                                                                     480
gaaagacata ggtgagacat tggcacgctc attctgttaa aaagacagat cacagaactg
                                                                     540
gatccttagt catgctttct gatacgtatc ccaggaacat gcttaaatgc aggtgacttc
```

| tttttcttt | tgcatatcaa | ctgcttgagg | atacagctgg | taacttttaa | tacttaatga | 600 |
|-------------|------------|------------|------------|------------|------------|------|
| accttggtta | aagccccatc | aaagcatttg | gatggtaata | actttcagaa | acaccattcc | 660 |
| ttcttcatct | atctttttca | ctaaatctaa | actgaagtgc | tactttcctg | ccttttccgt | 720 |
| gaataatttc | ttcatttact | gtttctttt | aagtatagcc | tttactatgc | caacgttatc | 780 |
| aaatggttct | tttacttgtg | cctatgtagc | tgcgaataat | attgccaaac | ttaattttc | 840 |
| ttgattacct | agtcagtgaa | acatatcagt | tgttgcaaaa | attgtgcagc | tctaagcaca | 900 |
| tttttacttt | tatggcaggt | tggagaataa | ggaagaaata | tttcttgatg | aagattaaaa | 960 |
| atcagccaaa | ggaacggcta | gtgttaagct | gggctgacct | tggcccagac | aagtattgtc | 1020 |
| agataaagat | tttcagtgtc | taatcaaact | tctgccttct | tgtttgcacc | cttacatcta | 1080 |
| tcgggttacc | tttgccacag | ctaatgaatc | ctcagcgttg | ctaattagga | tgtttaacga | 1140 |
| aaagggaaca | ttgaaggatc | tgatctacaa | ggcaaaacca | aaagacccat | ttctaaagaa | 1200 |
| gtactgcaac | cctaagaaga | ttcagggcct | ggaactccag | caaataaaaa | catatggacg | 1260 |
| gcaaatatta | gaggtactga | agtttcttca | tgacaaggga | ttcccttatg | ggcatcttca | 1320 |
| cacctccaat | gtgatgctcg | atggggacac | ttgccggctg | ctggaccttg | agaattcctt | 1380 |
| attgggcctg | ccttccttct | accgatctta | tttttcacaa | ttcaggaaaa | tcaatacatt | 1440 |
| ggaaagtgtg | gatgtccact | gctttggcca | cttactgtat | gaaatgactt | atggacgacc | 1500 |
| gccagactcg | gtgcctgtgg | actccttccc | tcctgccccg | tccatggctg | tggtggccgt | 1560 |
| gttggagtct | acgctgtctt | gtgaagcctg | taaaaatggc | atgcctacca | tctcccggct | 1620 |
| cttacagatg | ccattattca | gcgatgtttt | actaaccact | tctgaaaaac | cacagtttaa | 1680 |
| gatccctaca | aagttanaag | aggcattgag | aattgccaaa | gaatgtatag | agaagagact | 1740 |
| aattgaggaa | cagaaacaga | ttcaccagca | tcgaagactg | acaagagctc | agtcccacca | 1800 |
| | gaggaaagaa | | | | | 1837 |
| | 5 55 - | | | | | |
| <210> 1524 | | | | | | |
| <211> 493 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1524 | | | | | | |
| ggcacgagct | gacccctttt | cctcatctgt | ctaatccccc | aacttaggga | aataaatggt | 60 |
| tectageete | ttgatctcag | ttcagactgc | aaactcttag | gggcaggggt | agctacatat | 120 |
| caggetatgg | gtttggtgct | agaatggtgt | tgatactgtg | gtgttctctg | aggatgggga | 180 |
| teccagecaa | tgccatctgg | catagtgctg | tacacaggtg | agtttgttta | ggaagatttg | 240 |
| aggaagatac | ctggagtctt | tagaatagca | actcctgctg | atggagtaat | ctatctgtct | 300 |
| ctctttccag | gtggatggga | agagagtccc | aagggatgca | gggcatcctc | tgtacccctt | 360 |
| taatgacccg | tactgagacc | acagettett | ggcctccctt | ccagctctgc | agctaatgag | 420 |
| gt.cctgccac | aacggaaaga | gggagttaat | aaagccattg | gagcatccaa | aaaaaaaaa | 480 |
| aaaaaaaaaa | | 333-3 | 3 3 | | | 493 |
| | | | | | | |
| <210> 1525 | | | | | | |
| <211> 460 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | - | | | | | |
| <400> 1525 | | | | | | |
| | agccttcagt | ccctggggcc | cggagggctg | gccaggggct | tgcggggcac | 60 |
| tgggagccac | tcacttgagg | tggtccagca | tcatgcagct | ggccagcagg | gtggccgtgg | 120 |
| ggttggcgat | gttcttattg | gcgatactct | tgccggtgtt | cctcgtagcc | tggggaggca | 180 |
| agacgaagga | gagtgggtgg | agggcagaag | gatgccgggc | agtgactctg | ctcctgtgac | 240 |
| acatccagaa | gaagccactc | cacagggaca | aaagcccacc | agcgggtgcc | aggggttggg | 300 |
| ggaaggtgtg | gggacagata | gcttatgggg | acaggctttc | ctcgtggggt | ggtgaaaatg | 360 |
| ttctggaatg | acctggtggt | gacggcagta | caaccctgga | tatccaaaaa | actactaaat | 420 |
| catgcatttt | gaacgggcta | aaaaaaaaa | aaaaaaaaa | | | 460 |
| | | | | | | |
| <210> 1526 | | | | | | |
| <211> 1369 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | - | | | | | |
| <400> 1526 | | | | | | |
| ggcacgaggt | tttttgtaac | aaagtagcca | tcattataga | atattaataa | atggattatt | 60 |
| | | | | | | |

| | *** | | 2222442266 | ataaataaat | taasaassa | 120 |
|--|--|---|--|---|--|--|
| | | | aaaattaagg | | | 180 |
| | | | tatccaaata aaatggcttt | | | 240 |
| tttttactta | ttcatttagt | aaaaaacatt | ttttaatgga | aatatctgag | catggtcatt | 300 |
| aacataacca | ctccattcagt | tattggtgga | agtataaatt | aatccagtgt | ttctacaagg | 360 |
| | | | catttcattt | | | 420 |
| | | | ggcatggctt | | | 480 |
| | | | ggttaaaaaa | | | 540 |
| | | | ctttttaaaa | | | 600 |
| | | | atgtattttt | | | 660 |
| acaggagaat | agcatasaca | tagaagatag | agcttgcagt | gagccgagat | cataccacta | 720 |
| | | | catctcaaaa | | | 780 |
| | | | ttactaaatc | | | 840 |
| ctttgaatat | tttaatgaat | tacccacaac | aggcttgcaa | atagtttcta | gccaggttag | 900 |
| octataataa | tottaattaa | gacgatttgt | ttagcctggc | ttagtggcat | gcacctgtag | 960 |
| tcctacctac | tcaggaggct | gaggagagaa | aaaaaaattt | gctggctgca | cttgtatttg | 1020 |
| | | | catcaaaaca | | | 1080 |
| | | | ggaagctaag | | | 1140 |
| | | | gtgaaacccc | | | 1200 |
| | | | aatttcagct | | | 1260 |
| | | | cagtaagccg | | | 1320 |
| agcctaggca | acaagagcaa | cactccatct | caaaaaaaaa | aaaaaaaaa | _ | 1369 |
| | | | | | | |
| | | | | | | |
| <210> 1527 | | | | | | |
| <210> 1527 <211> 1556 | | | | | | |
| | | | | | | |
| <211> 1556 | sapiens | | | | | |
| <211> 1556 <212> DNA | sapiens | | | | | |
| <211> 1556 <212> DNA <213> Homo <400> 1527 | - | | | | | |
| <211> 1556 <212> DNA <213> Homo <400> 1527 ggcacgagtg | aagctccgcg | | gggccgttgg | | | 60 |
| <211> 1556 <212> DNA <213> Homo <400> 1527 ggcacgagtg ttgggggacc | aagctccgcg ccctcattcc | tgccgctgcc | gtccctgctg | cctcatggcg | gccatcggag | 120 |
| <211> 1556 <212> DNA <213> Homo <400> 1527 ggcacgagtg ttgggggacc ttcacctggg | aagctccgcg ccctcattcc ctgcacctca | tgccgctgcc gcctgtgtgg | gtccctgctg ccgtctataa | cctcatggcg ggatggccgg | gccatcggag gctggtgtgg | 120 180 |
| <211> 1556 <212> DNA <213> Homo <400> 1527 ggcacgagtg ttgggggacc ttcacctggg ttgcaaatga | aagctccgcg ccctcattcc ctgcacctca tgccggtgac | tgccgctgcc gcctgtgtgg cgagttactc | gtccctgctg ccgtctataa cagctgttgt | cctcatggcg ggatggccgg tgcttactca | gccatcggag gctggtgtgg gaaaatgaag | 120 180 240 |
| <211> 1556 <212> DNA <213> Homo <400> 1527 ggcacgagtg ttgggggacc ttcacctggg ttgcaaatga agattgttgg | aagctccgcg ccctcattcc ctgcacctca tgccggtgac attggcagca | tgccgctgcc gcctgtgtgg cgagttactc aaacaaagta | gtccctgctg ccgtctataa cagctgttgt gaataagaaa | cctcatggcg ggatggccgg tgcttactca tatttcaaat | gccatcggag gctggtgtgg gaaaatgaag acagtaatga | 120 180 240 300 |
| <211> 1556 <212> DNA <213> Homo <400> 1527 ggcacgagtg ttgggggacc ttcacctggg ttgcaaatga agattgttgg aagtaaagca | aagctccgcg ccctcattcc ctgcacctca tgccggtgac attggcagca gatcctgggc | tgccgctgcc gcctgtgtgg cgagttactc aaacaaagta agaagctcca | gtccctgctg ccgtctataa cagctgttgt gaataagaaa gtgatccaca | cctcatggcg ggatggccgg tgcttactca tatttcaaat agctcagaaa | gccatcggag gctggtgtgg gaaaatgaag acagtaatga tacatcgcgg | 120 180 240 300 360 |
| <211> 1556 <212> DNA <213> Homo <400> 1527 ggcacgagtg ttgggggacc ttcacctggg ttgcaaatga agattgttgg aagtaaagca aaagtaaatg | aagctccgcg ccctcattcc ctgcacctca tgccggtgac attggcagca gatcctgggc tttagtcatt | tgccgctgcc gcctgtgtgg cgagttactc aaacaaagta agaagctcca gaaaaaaatg | gtccctgctg ccgtctataa cagctgttgt gaataagaaa gtgatccaca ggaaattacg | cctcatggcg ggatggccgg tgcttactca tatttcaaat agctcagaaa atatgaaata | gccatcggag gctggtgtgg gaaaatgaag acagtaatga tacatcgcgg gatactggag | 120 180 240 300 360 420 |
| <211> 1556 <212> DNA <213> Homo <400> 1527 ggcacgagtg ttgggggacc ttcacctggg ttgcaaatga agattgttgg aagtaaagca aaagtaaatg aagaaacaaa | aagctccgcg ccctcattcc ctgcacctca tgccggtgac attggcagca gatcctgggc tttagtcatt atttgttaac | tgccgctgcc gcctgtgtgg cgagttactc aaacaaagta agaagctcca gaaaaaaatg ccagaagatg | gtccctgctg ccgtctataa cagctgttgt gaataagaaa gtgatccaca ggaaattacg ttgccagact | cctcatggcg ggatggccgg tgcttactca tatttcaaat agctcagaaa atatgaaata gatatttagt | gccatcggag gctggtgtgg gaaaatgaag acagtaatga tacatcgcgg gatactggag aaaatgaaag | 120 180 240 300 360 420 480 |
| <211> 1556 <212> DNA <213> Homo <400> 1527 ggcacgagtg ttgggggacc ttcacctggg ttgcaaatga agattgttgg aagtaaagca aaagtaaatg aagaacaaa aaacggcaca | aagctccgcg ccctcattcc ctgcacctca tgccggtgac attggcagca gatcctgggc tttagtcatt atttgttaac ttctgtattg | tgccgctgcc gcctgtgtgg cgagttactc aaacaaagta agaagctcca gaaaaaaatg ccagaagatg ggctcagatg | gtccctgctg ccgtctataa cagctgttgt gaataagaaa gtgatccaca ggaaattacg ttgccagact caaatgatgt | cctcatggcg ggatggccgg tgcttactca tatttcaaat agctcagaaa atatgaaata gatatttagt agttattact | gccatcggag gctggtgtgg gaaaatgaag acagtaatga tacatcgcgg gatactggag aaaatgaaag gtcccgtttg | 120 180 240 300 360 420 480 540 |
| <211> 1556 <212> DNA <213> Homo <400> 1527 ggcacgagtg ttgggggacc ttcacctggg ttgcaaatga agattgttgg aagtaaagca aaagtaaatg aagaaacaaa aaacggcaca attttggaga | aagctccgcg ccctcattcc ctgcacctca tgccggtgac attggcagca gatcctgggc tttagtcatt atttgttaac tcctgtattg aaagcaaaaa | tgccgctgcc gcctgtgtgg cgagttactc aaacaaagta agaagctcca gaaaaaaatg ccagaagatg ggctcagatg aatgctcttg | gtccctgctg ccgtctataa cagctgttgt gaataagaaa gtgatccaca ggaaattacg ttgccagact caaatgatgt gatccttcaa | cctcatggcg ggatggccgg tgcttactca tatttcaaat agctcagaaa atatgaaata gatatttagt agttattact acatgatgtg | gccatcggag gctggtgtgg gaaaatgaag acagtaatga tacatcgcgg gatactggag aaaatgaaag gtcccgtttg agaggaaatg | 120 180 240 300 360 420 480 540 |
| <211> 1556 <212> DNA <213> Homo <400> 1527 ggcacgagtg ttgggggacc ttcacctggg ttgcaaatga agattgttgg aagtaaagca aaagtaaatg aagaaacaaa aaacggcaca attttggaga cgcgagccat | aagctccgcg ccctcattcc ctgcacctca tgccggtgac attggcagca gatcctgggc tttagtcatt atttgttaac ttctgtattg aaagcaaaaa gatgaaatta | tgccgctgcc gcctgtgtgg cgagttactc aaacaaagta agaagctcca gaaaaaaatg ccagaagatg ggctcagatg aatgctcttg acgaacagtg | gtccctgctg ccgtctataa cagctgttgt gaataagaaa gtgatccaca ggaaattacg ttgccagact caaatgatgt gatccttcaa ctgaagtagc | cctcatggcg ggatggccgg tgcttactca tatttcaaat agctcagaaa atatgaaata gatattagt agttattact acatgatgtg gaaacattct | gccatcggag gctggtgtgg gaaaatgaag acagtaatga tacatcgcgg gatactggag aaaatgaaag gtcccgtttg agaggaaatg ttgtcaacct | 120 180 240 300 360 420 480 540 600 |
| <211> 1556 <212> DNA <213> Homo <400> 1527 ggcacgagtg ttgggggacc ttcacctggg ttgcaaatga agattgttgg aagtaaagca aaagtaaatg aagaacaaa aaacggcaca attttggaga cgcgagccat tgggaagtgc | aagctccgcg ccctcattcc ctgcacctca tgccggtgac attggcagca gatcctgggc tttagtcatt atttgttaac ttctgtattg aagcaaaaa gatgaaatta caactgtttt | tgccgctgcc gcctgtgtgg cgagttactc aaacaaagta agaagctcca gaaaaaaatg ccagaagatg ggctcagatg aatgctcttg acgaacagtg cttgactcat | gtccctgctg ccgtctataa cagctgttgt gaataagaaa gtgatccaca ggaaattacg ttgccagact caaatgatgt gatccttcaa ctgaagtagc tatatgaagg | cctcatggcg ggatggccgg tgcttactca tatttcaaat agctcagaaa atatgaaata gatattagt agttattact acatgatgtg gaaacattct tcaagatttt | gccatcggag gctggtgtgg gaaaatgaag acagtaatga tacatcgcgg gatactggag aaaatgaaag gtcccgtttg agaggaaatg ttgtcaacct gattgcaatg | 120 180 240 300 360 420 480 540 600 660 |
| <211> 1556 <212> DNA <213> Homo <400> 1527 ggcacgagtg ttgggggacc ttcacctggg ttgcaaatga agattgttgg aagtaaagca aaagtaaatg aagaaacaaa aaacggcaca attttggaga cgcgagccat tgggaagtgc tgccagagc | aagctccgcg ccctcattcc ctgcacctca tgccggtgac attggcagca gatcctgggc tttagtcatt atttgttaac ttctgtattg aaagcaaaaa gatgaaatta caactgtttt aagatttgaa | tgccgctgcc gcctgtgtgg cgagttactc aaacaaagta agaagctcca gaaaaaaatg ccagaagatg ggctcagatg aatgctcttg acgaacagtg cttgactcat cttctttgtt | gtccctgctg ccgtctataa cagctgttgt gaataagaaa gtgatccaca ggaaattacg ttgccagact caaatgatgt gatccttcaa ctgaagtagc tatatgaagg ctccactttt | cctcatggcg ggatggccgg tgcttactca tatttcaaat agctcagaaa atatgaaata gatatttagt agttattact acatgatgtg gaaacattct tcaagattt taataagtgt | gccatcggag gctggtgtgg gaaaatgaag acagtaatga tacatcgcgg gatactggag aaaatgaaag gtcccgtttg agaggaaatg ttgtcaacct gattgcaatg atagaagcaa | 120 180 240 300 360 420 480 540 600 660 720 780 |
| <211> 1556 <212> DNA <213> Homo <400> 1527 ggcacgagtg ttgggggacc ttcacctggg ttgcaaatga agattgttgg aagtaaagca aaagtaaatg aagaacaaa aaacggcaca attttggaga cgcgagccat tgggaagtgc tgccagagc tgtccagagc tcagaggact | aagctccgcg ccctcattcc ctgcacctca tgccggtgac attggcagca gatcctgggc tttagtcatt atttgttaac ttctgtattg aaagcaaaaa gatgaaatta caactgtttt aagatttgaa cttagatcaa | tgccgctgcc gcctgtgtgg cgagttactc aaacaaagta agaagctcca gaaaaaatg ccagaagatg ggctcagatg aatgctcttg acgaacagtg cttgactcat cttctttgtt aatggattta | gtccctgctg ccgtctataa cagctgttgt gaataagaaa gtgatccaca ggaaattacg ttgccagact caaatgatgt gatccttcaa ctgaagtagc tatatgaagg ctccactttt cagcagatga | cctcatggcg ggatggccgg tgcttactca tatttcaaat agctcagaaa atatgaaata gatatttagt agttattact acatgatgtg gaaacattct tcaagatttt taataagtgt tatcaacaag | gccatcggag gctggtgtgg gaaaatgaag acagtaatga tacatcgcgg gatactggag aaaatgaaag gtcccgtttg agaggaaatg ttgtcaacct gattgcaatg atagaagcaa gttgtccttt | 120 180 240 300 360 420 480 540 600 660 720 780 840 |
| <211> 1556 <212> DNA <213> Homo <400> 1527 ggcacgagtg ttgggggacc ttcacctggg ttgcaaatga agattgttgg aagtaaagca aaagtaaatg aagaacaaa aaacggcaca attttggaga cgcgagccat tgggaagtgc tgtccagagc tcagaggact gtggagggtc | aagctccgcg ccctcattcc ctgcacctca tgccggtgac attggcagca gatcctgggc tttagtcatt atttgttaac ttctgtattg aaagcaaaaa gatgaaatta caactgtttt aagatttgaa cttagatcaa ttctcgaatc | tgccgctgcc gcctgtgtgg cgagttactc aaacaaagta agaagctcca gaaaaaatg ccagaagatg ggctcagatg aatgctcttg acgaacagtg cttgactcat cttctttgtt aatggatta ccaaagctac | gtccctgctg ccgtctataa cagctgttgt gaataagaaa gtgatccaca ggaaattacg ttgccagact caaatgatgt gatccttcaa ctgaagtagc tatatgaagg ctccactttt cagcagatga agcaactgat | cctcatggcg ggatggccgg tgcttactca tatttcaaat agctcagaaa atatgaaata gatatttagt agttattact acatgatgtg gaaacattct tcaagattt tatcaacaag tataagtct | gccatcggag gctggtgtgg gaaaatgaag acagtaatga tacatcgcgg gatactggag aaaatgaaag gtcccgtttg agaggaaatg ttgtcaacct gattgcaatg atagaagcaa gttgtccttt ttcccagctg | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| <211> 1556 <212> DNA <213> Homo <400> 1527 ggcacgagtg ttgggggacc ttcacctggg ttgcaaatga agattgttgg aagtaaagca aaagtaaatg aagaacaaa aaacggcaca attttggaga cgcgagccat tgggaagtgc tgdcagagc tcagaggact gtggagggtc ttgagcttct | aagctccgcg ccctcattcc ctgcacctca tgccggtgac attggcagca gatcctgggc tttagtcatt atttgttaac ttctgtattg aaagcaaaaa gatgaaatta caactgtttt aagatttgaa cttagatcaa ttctcgaatc caattctatc | tgccgctgcc gcctgtgtgg cgagttactc aaacaaagta agaagctcca gaaaaaatg ccagaagatg ggctcagatg aatgctcttg acgaacagtg cttgactcat cttctttgtt aatggattta ccaaagctac cctcctgatg | gtccctgctg ccgtctataa cagctgttgt gaataagaaa gtgatccaca ggaaattacg ttgccagact caaatgatgt gatccttcaa ctgaagtagc tatatgaagg ctccactttt cagcagatga | cctcatggcg ggatggccgg tgcttactca tatttcaaat agctcagaaa atatgaaata gatatttagt agttattact acatgatgtg gaaacattct tcaagattt taataagtgt tatcaacaag taaagatctt tattggtgca | gccatcggag gctggtgtgg gaaaatgaag acagtaatga tacatcgcgg gatactggag aaaatgaaag gtcccgtttg agaggaaatg ttgtcaacct gattgcaatg atagaagcaa gttgtccttt ttcccagctg gctatagaag | 120 180 240 300 360 420 480 540 600 660 720 780 840 |

cagccagaga tattttagtt aagggtgtgg acgaatcagg agcccagtag attcacagtg

ctgtttccat cagggactcc tttgccagct cgaagacaac acacattgca agcccctgga

agcatatett cagtgtgeet tgaactetat gagtetgatg ggaagaacte tgecaaagag

gaaaccaagt ttgcacaggt tgtactccag gatttagata aaaaagaaaa tggattacgt

gatatattag ctgttcttac tatgaaaagg gatggatctt tacatgtgac atgcacagat

caagaaactg gaaaatgtga agcaatctct attgagatag catcttagtg ttttagagaa

atcaagaatt tttaaaaaca agaatatcaa catttggttt tgtgtataag tggtgtttgt

attaaaatac tttttcaatg aactgtataa actatgtttt attaaactac aatatatcag

1080

1140

1200

1260

1320

1380

1440

1500

1556

<210> 1528

<211> 1259

<212> DNA

<213> Homo sapiens

| 400 4500 | | | | | | |
|-------------------------|------------|------------|------------|----------------|------------|------|
| <400> 1528 | agaggtttat | tataatttat | catttgtata | tatataatat | gaattgggta | 60 |
| | | | atttctttt | | | 120 |
| | | | atcaagtgta | | | 180 |
| | | | taattttcct | | | 240 |
| | | | tttgtcactc | | | 300 |
| | | | ttcatacagc | | | 360 |
| | | | tgcataaaat | - | - | 420 |
| | | | ttacaaacat | | | 480 |
| | | | tgtctgttta | | | 540 |
| | _ | | atcttaaaat | | | 600 |
| | | | atgaagaaaa | | | 660 |
| | | | tagccttagc | | | 720 |
| | _ | | aatcttaaat | - - | _ | 780 |
| | _ | | attttttctt | - | - | 840 |
| _ | | | ttggaagggg | | | 900 |
| | | | ttaatgagtc | | | 960 |
| | | | catgagaatg | | | 1020 |
| | | | caatttatat | | | 1080 |
| catgcttatt | gataaatcta | aatctctatt | ttagagcaat | atactttgct | gcttattcaa | 1140 |
| actgcaagga | aaagttgaat | gatgtatttg | atcctgattc | tacccaagta | catatgattt | 1200 |
| cagctgcaat | ggcaggtatg | aatgtataat | attaaaaaaa | aaaaaaaaa | aaactcgag | 1259 |
| | | | | | | |
| <210> 1529 | | | | | | |
| <211> 1217 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1529 | | | | | | |
| | anattaataa | attaatatat | cccctcccag | ++a++>++aa | tttataaaat | 60 |
| | | | cctctgcaga | | _ | 120 |
| | | | tcagctgtag | | | 180 |
| | | | gcattttgtg | | | 240 |
| | | | caactgcata | | | 300 |
| | | | acccaatgaa | | | 360 |
| | | - | tcccagaaaa | - | | 420 |
| | | | gatttcagat | | | 480 |
| _ | - | - | cagatcagta | | | 540 |
| | | - | atctccaagc | | | 600 |
| | _ | | aagaagatac | | | 660 |
| tgctaattta | tggtaataac | atccatcatt | agaatcaata | cattgttgat | gctcaacatg | 720 |
| | | | ccacacaaat | | | 780 |
| cctgtataat | aaattcttga | aactcaaaac | taaggtatta | aatgtgaagg | actgactcag | 840 |
| aatatggtgg | aggaagaaaa | taattgggaa | ggaggaattg | tagaggaaca | caaggaaact | 900 |
| tttaagtgta | atttgtttat | tcattatttg | gatggctttt | ggggatgcac | aggtgagcac | 960 |
| gagtggaata | acattttgtt | ttgtttgttt | gtttgtttt | ttctgaagag | atgtggtcct | 1020 |
| actctgcgac | ccaggctgga | gtgtagtggt | gggatcatag | ttcaatgtag | cctccaactt | 1080 |
| ctggtctcca | acaatactcc | tgcatctgcc | atctaagtag | ctggaactac | cgttgtttgc | 1140 |
| cagcaggctt | ggcttgagta | cttattaaac | cgcacacttt | ttgcaataaa | aaaaaataaa | 1200 |
| aaaaaaaaa | aaaaaaa | | | | | 1217 |
| <210> 1530 | | | | | | |
| <211> 1876 | | | | | | |
| <211> 1870 <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | - | | | | | |
| <400> 1530 | | | | | | |
| | | | cgccgtcctc | | | 60 |
| | | | cctgagcgcc | | | 120 |
| | | | tatggctaat | | | 180 |
| tgaagtaaac | cttgcttcac | ctacttctcc | ggaccttctt | ggtgtgtatg | aatcaggaac | 240 |
| | | | | | | |

| | | | • | | | 300 |
|-----------------------|------------|------------|------------|-------------|------------|------|
| | | | ctaccggcca | | | 360 |
| | | | ttctgaactt | | | 420 |
| atcccccaga | cgtttaaatt | gtgcggaaat | atctagtatc | agetteaty | gaagaaaga | 480 |
| agccccttgc | tctacctctg | gagtcacage | tggattaact | adallaacia | caayaaayya | 540 |
| | | | gggtgctact | | | 600 |
| | | | tagtctgtct | | | 660 |
| | | | attaaaagaa | | | 720 |
| | | | gaggctttca | | | 780 |
| | | | atttgaggaa | | | 840 |
| | | | acagctaaaa | | | 900 |
| tgtacttcaa | gctgaagtag | ctgcattgaa | gacacttgta | ctgtccagtt | ctccaacatc | 960 |
| acctacgcag | gageetttge | caggtggaaa | gacacctttt | aaaaaggggc | toggagaat | 1020 |
| | | | tcatcaggac | | | 1020 |
| | | | cttgtataat | | | 1140 |
| | | | tcttagacaa | | | 1200 |
| ttccatgttt | aacattctca | aaaagtgagt | tggcttcagc | tgttetggag | getgtggaaa | 1260 |
| acaatactct | aagcattgaa | ccagtgggat | tacaacctat | ceggittgig | taatataaaa | 1320 |
| | | | ctctcactgg | | | 1380 |
| | | | attattatat | | | 1440 |
| | | | acattcgata | | | 1500 |
| | | | aggttatgca | | | 1560 |
| | | | tctgatgctc | | | 1620 |
| | | | tttttatggt | | | 1680 |
| | | | gcaaattgct | | | 1740 |
| _ | | | ttctttagtt | | | 1800 |
| | | | gccaaaaaaa | | | 1860 |
| | | aaaaaaaaac | tcgagggggg | geeeggwiiee | aattegeeet | 1876 |
| atagtgagtc | gtacac | | | | | 10/0 |
| -010- 1531 | | | | | | |
| <210> 1531 <211> 1876 | | | | | | |
| | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1531 | | | | | | |
| | agagtatage | agaaagggct | cgccgtcctc | ctccatttct | cactacttca | 60 |
| | | | cctgagcgcc | | | 120 |
| | | | tatggctaat | | | 180 |
| | | | ggaccttctt | | | 240 |
| | | | ctaccggcca | | | 300 |
| totacctato | caddcaaatd | cattagatgt | ttctgaactt | cctacacaac | ccgtgtattc | 360 |
| | | | atctagtatc | | | 420 |
| | | | | | | |

atcccccaga cgtttaaatt gtgcggaaat atctagtatc agctttcatg ttacagaccc 420 480 agccccttgc tctacctctg gagtcacagc tggattaact aaattaacta caagaaagga 540 caactataat gcagagaga agtttttaca gggtgctact ataacagagg cttgcgatgg cagtgatgat atttttgggt tgagtactga tagtctgtct cgtttacgaa gcccatctgt 600 tttggaagtt agagaaaagg gctatgaacg attaaaagaa gaactcgcaa aagctcagag 660 ggaactgaag ttaaaagatg aagaatgtga gaggctttca aaagtgcgag atcaacttgg 720 780 acaggaattg gaagaactca cagctagtct atttgaggaa gctcataaaa tggtgagaga 840 agcaaatatc aagcaggcaa cagcagaaaa acagctaaaa gaagcacaag gaaaaattga tgtacttcaa gctgaagtag ctgcattgaa gacacttgta ttgtccagtt ctccaacatc 900 960 acctacgcag gagcctttgc caggtggaaa gacacctttt aaaaaggggc atacaagaaa 1020 taaaagcaca agcagtgcta tgagtggcag tcatcaggac ctcagtgtga tacagccaat tgtaaaagac tgcaaagagg ctgacttatc cttgtataat gaattccgat tgtggaagga 1080 tgagcccaca atggacagga ccgtgtcctt tcttagacaa aatctaccag gaagatatct 1140 ttccatgttt aacattctca aaaagtgagt tggcttcagc tgttctggag gctgtggaaa 1200 acaatactct aagcattgaa ccagtgggat tacaacctat ccggtttgtg aaagcttctg 1260 cagttgaatg cggaggacca aaaaaatgtg ctctcactgg ccagagtaag tcctgtaaac 1320 1380 acagaattaa attaggggac tcaagcaact attattatat ttctcctttt tgcagataca 1440 ggatcacttc tgtatgtaac ttttttacat acattcgata cattcagcag ggactcgtga 1500 aacagcagga tgttgatcag atgttttggg aggttatgca gttgagaaaa gagatgtcat 1560 tggcaaagct gggttatttc aaagaggaac tctgatgctc tgcgtgggac catgcctgaa

```
ctcccgaat aactgaaaaa tggctgaata tttttatggt tacttgatat ttattccaa
                                                                     1620
ggagtgagcc taagactttt ttcccctttt gcaaattgct ctaagaagta ccatgatttc
                                                                     1680
                                                                     1740
ttttaaactg atctatgctg tgtttgctta ttctttagtt gaacacacta tgaagaattc
caggtgtact agtgaatgta atttatagtt gccaaaaaaa aaaaaacctg aaataaataa
                                                                     1800
atgttagatt gaaaaaaaa aaaaaaaaac tcgagggggg gcccggwmcc aattcgccck
                                                                     1860
                                                                     1876
atagtgagtc gtacac
<210> 1532
<211> 1133
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (38)
<223> n equals a,t,g, or c
<400> 1532
caatccccc gaawaawaga aactgggaaa kgataaancc ccctaatgcc caagggtccw
                                                                       60
                                                                      120
agtgtgwtcc ytagtggtta wactgggaag tgtgtggaga atttaaggtg cctgctctgc
tgctcyggat ggctgaaggc tccygggcca tcttcatgtg ctgcttgaag agctcctatt
                                                                      180
ttgtactcct ggctagaatg ctgtggaaca aatacaaagt gaaaaaagtt ctctgtagat
                                                                      240
ttctgaagtg catattcatt gatgccaaga aaaaaaaaa gttgcctttt tgaagtgatg
                                                                      300
                                                                      360
ttttttgctg tcttcttaaa cacaaggctt ttttgaatga ttagtatatt tcatggtaaa
                                                                      420
gaaaacagcc tgtctggctc aaagcaatta aatagaatgt aatggtgagt acaaatgagt
gcacatgtca ggactcaggt ctaactcctt gtctcctgag cctaaagatt gcaacataca
                                                                      480
caagaacaca ctcctattcc taccccacac actcagggac aagcccaact aaagcttaca
                                                                      540
                                                                      600
aggagaccag ggtggctctg tccaggggag aagccagtta tggaacagtg cattgagagc
                                                                      660
catggtagga gaggcccaca gttctctgga gcatgcagca ggggcacccc acctggcctt
                                                                      720
gaggatcagg gggagtcaaa ggataaagca tggggctgat gacgtctgag ggagtgtgat
                                                                      780
cctccatgta tggcctctgc ctgctgtctc acatgtccct tctggtggtc acttgggctc
                                                                      840
taggagtata cgtcacctca gaccatctgg cagaaatact ccaggctcct accccaaagc
                                                                      900
acatgtcagc cttgctgctg gagcacgaag acaatgtaaa tgaaacatga aatggaggag
                                                                      960
ttgtgagacc ctgaccctga gtccttactt gaaagctgct gctggtgttc tgagtgtctt
                                                                     1020
ttggactett atttettgee etttteetta ttaggeaage agtaaettag gaagtaggta
                                                                     1080
agagcaataa atgtgacatg ttatgtcatc atagtaggag ctcatgggaa taaaagtcag
                                                                     1133
tggcttgatg cttctgttag aggcaaaaaa aaaaaaaaa aaaaaaaaa aaa
<210> 1533
<211> 1609
<212> DNA
<213> Homo sapiens
<400> 1533
aattcggcac gagcggcacg agcagccttc ctcccccagc ctgagtgact actctattcc
                                                                       60
                                                                      120
ttggtccctg ctattgtcgg ggacgattgc atgggctacg ccaggaaagt aggctgggtg
                                                                      180
accgcaggcc tggtgattgg ggctggcgcc tgctattgca tttatagact gactagggga
                                                                      240
agaaaacaga acaaggaaaa aatggctgag ggtggatctg gggatgtgga tgatgctggg
                                                                      300
gactgttctg gggccaggta taatgactgg tctgatgatg atgatgacag caatgagagc
                                                                      360
aagagtatag tatggtaccc accttgggct cggattggga ctgaagctgg aaccagagct
agggccaggg caagggccag ggctacccgg gcacgtcggg ctgtccagaa acgggcttcc
                                                                      420
                                                                      480
cccaattcag atgataccgt tttgtcccct caagagctac aaaaggttct ttgcttggtt
                                                                      540
gagatgtctg aaaagcctta tattcttgaa gcagctttaa ttgctctggg taacaatgct
                                                                      600
gcttatgcat ttaacagaga tattattcgt gatctgggtg gtctcccaat tgtcgcaaag
attctcaata ctcgggatcc catagttaag gaaaaggctt taattgtcct gaataacttg
                                                                      660
                                                                      720
agtgtgaatg ctgaaaatca gcgcaggctt aaagtataca tgaatcaagt gtgtgatgac
acaatcactt ctcgcttgaa ctcatctgtg cagcttgctg gactgagatt gcttacaaat
                                                                      780
                                                                      840
atgactgtta ctaatgagta tcagcacatg cttgctaatt ccatttctga cttttttcgt
                                                                      900
ttattttcag cgggaaatga agaaaccaaa cttcaggttc tgaaactcct tttgaatttg
                                                                      960
gctgaaaatc cagccatgac tagggaactg ctcagggccc aagtaccatc ttcactgggc
                                                                     1020
tccctcttta ataagaagga gaacaaagaa gttattctta aacttctggt catatttgag
```

```
1080
aacataaatg ataatttcaa atgggaagaa aatgaaccta ctcagaatca attcggtgaa
                                                                   1140
qqttcacttt ttttcttttt aaaagaattt caagtgtgtg ctgataaggt tctgggaata
                                                                   1200
gaaagtcacc atgatttttt ggtgaaagta aaagttggaa aattcatggc caaacttgct
                                                                   1260
gaacatatgt tcccaaagag ccaggaataa caccttgatt ttgtaattta gaagcaacac
                                                                   1320
acattgtaaa ctattcattt tctccacctt gtttatatgg taaaggaatc ctttcagctg
ccagttttga ataatgaata tcatattgta tcatcaatgc tgatatttaa ctgagttggt
                                                                   1380
ctttaggttt aagatggata aatgaatatc actacttgtt ctgaaaacat gtttgttgct
                                                                   1440
ttttatctcg ctgcctagat tgaaatattt tgctatttct tctgcataag tgacagtgaa
                                                                   1500
ccaattcatc atgagtaagc tcccttctgt cattttcatt gatttaattt gtgtgtcatc
                                                                   1560
1609
<210> 1534
<211> 1359
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (808)
<223> n equals a,t,g, or c
<400> 1534
                                                                     60
ggcacgagcc gaggctggca ctggcacaac tacctgagga tggctcgcag ggcagtcggg
                                                                    120
agctgctgct ggctctgtcc tggctcttgg cccgaggacc tgtgcccgag cagatgctgg
                                                                    180
cccaggcccg agtgcctctg ggtgacgaga tgactgtgtg ccagtgtgag gccctggcca
                                                                    240
gccctggccc acctgcaccc cacatggaag cagagggtcc tgtggatgtc cgccatgtgc
                                                                    300
agtggctgat gggaaagctg cggttccggt ggcgccagct ggtgtccagt cagcaggagc
                                                                    360
agtgcgccct cctgagcaag atccacctgt acacacgcgg ctgccacagc gaccagagcc
                                                                    420
ttagccatct gtctgtcact gaagcagaga tgctcagggg acccagaggg aggccagcag
                                                                    480
ctgctgcggg actctggagc gtgagaacca gcgcctggag gctgtcctgg cgtggcggcg
                                                                    540
ctctgagctg gtcttctggc ggtggatgga cacggtcctg ggcacctgtg ccccggaggt
                                                                    600
gcctgctgca gcctcacagc ccaccccct gccctgggtc cccgagcgcg ggggtggcga
                                                                    660
qttqqacctq qtaqtqcqqq agctqcaggc actggaggag gagctgcggg aggctgcgga
                                                                    720
gcgcaggcgg gcggcctggg aggccaaggc tggaggctgt ggacgggggc cagagtggag
tgccgcgcg cgggcctctc gggaggctgt ggaaaaggag ctgggagctc tacagcagtg
                                                                    780
ctgggagcga gacggtggcc cggcccancc ccatgggcca caccggctgg tgagacgaaa
                                                                    840
                                                                    900
ggatggggca gcaggggacc gggacctgcg ggcagctgtg gtgatcagga cgctgaggag
                                                                    960
ccaggaggcc tgcctggagg cggtgctacg tcgactacag ggacagtgtc ggcaggaact
ggccaggctg gtgggagccc gccctggtct catctggatc ccgccacctg gacgctgagg
                                                                   1020
                                                                   1080
gcctgtcgac gggccctcgt gtgggaagcc tgccctggcc cagcctggct gggtcttgga
ggagcagatt ccaaggccag gtggccgcag ggacgatgca gatgcagagc ccacgtcaca
                                                                   1140
tgctcgctcc aggggtgggg ctgggctgac tctggccgga tcccaggcct gtggctagca
                                                                   1200
                                                                   1260
gcactgggga caggaatggc tggtcccttg aggaggtcgt gacaggctca gcctggtggt
ctggagggga ctcggaaata aattgtagca gctttcctgc caaaaaaaaa aaaaaaaaa
                                                                   1320
1359
<210> 1535
<211> 1490
<212> DNA
<213> Homo sapiens
<400> 1535
ggcacgagtg gactcgagca aagatgacct cactggagtt ggactttctt ctctttgctc
                                                                     60
ctggcagtgt tcccactgat gccggttgta ggtcgaaagc cagacatctc tctagtgatg
                                                                    120
ggtgcaggct tgctggttct tctgttatcc ctgtgtgttg taacatctct catgaaaaga
                                                                    180
                                                                    240
aaagatagct ttataaagga agagctattg gtacatctgt tacaggtgct gagcacagtg
                                                                    300
ctctccatgt atgttgtgta tagcactcag agtagtctac tcaggaagca aggactgcct
                                                                    360
ctcatgaatc aaattattag ctgggcaaca ttagcctctt ccttggttgt gccactactg
                                                                    420
agttctccag ttctctttca gcgattgttc agcatacttc tttcattgat gtcaacctac
                                                                    480
ctacttctaa gcacagggta tgaagctctc tttccactag tgttgtcttg tttgatgttt
                                                                    540
```

gtctggataa acatagaaca agaaactcta caacaatctg gtgtttgctg taaacaaaag

<213> Homo sapiens

```
600
ctcaccagta tccagttctc ttataatact gatataactc agtttcgaca gctttgatct
                                                                    660
tgcctctgtc tattgctttc tgactgtgtt cagtcctttt atgatgggag ccctgatgat
                                                                    720
gtggaagatt ttaatcccct ttgttcttgt tatgtgtgct tttgaagcag ttcagttgac
                                                                    780
tactcagtta tcgtcaaaaa gcctttttct cattgttctc gtcatatcag acattatggc
                                                                    840
tttgcatttt ttcttcttgg tcaaggatta tggcagctgg cttgatattg ggacaagcat
                                                                    900
cagccactat gtgattgtca tgtccatgac catctttttg gtgttcctca atgggctggg
cccagctgct cacaacgaag aaactcagac tatgtggcaa acccaaaagt cacttcatgt
                                                                    960
gaggttgctg aagcaccatt cagcatctgg atcctgattc tccttttaag ctaaaatctc
                                                                   1020
atcaaggctt caataagaag atggatatgg atatatagta tattctactc ctgtaaggaa
                                                                   1080
aatggtattt ggaattccga attgacaggt tatctggaac aaaggagctt ctttttttt
                                                                   1140
ctaggttttg caggcatgaa atagtgatta tatctgtgga aaagcatagg aaggcattct
                                                                   1200
                                                                   1260
cctttttcat tttttcctt tggctggcag ctcttcccag tgatgttgag agcacctgca
gcaatctggt ccccagtcgc acaacttccc acatacccag aggagagcat atgcctgtgg
                                                                   1320
gggcagtgct gatggcatcc agagtcattg ctgtggctga gctggaagga aatcaccagg
                                                                   1380
                                                                   1440
tgccaccgtc aatatttatc agctttcagc actggttttg ttagacagtc agggtgtatt
                                                                   1490
<210> 1536
<211> 522
<212> DNA
<213> Homo sapiens
<400> 1536
aaaatataaa aataaaatgc acgtcttcca ttcttcccca ctgcctgtgt atagtggagg
                                                                    60
                                                                    120
ttggtgctca ctcttggtcc ttctgagctt agcagaaaga actatgggca gttctacctg
aaaagggaga actcacatgg gcaggaaaga gcattgtggc aacaaaggag aggtcctcac
                                                                    180
                                                                    240
tctgctcggc tctaggaagc cacagggggc ttgatatcag ctcagtctac aagaagtctt
                                                                    300
tccttccact gcttgtggtt gatttttaat ttttaatgta aaagcatatt gcttgagcca
                                                                    360
gggaatttga gaccagcctg ggcaacatgg tgagactcag tctccacaaa aaatacacaa
                                                                    420
aattageegg gegtgttgge atetgeetgt agteecaaet aettaaggge etgaggtggg
                                                                    480
aggategett gageeceagg aggtegagge agetgtgage tgagetgaga teacaceaet
                                                                    522
<210> 1537
<211> 930
<212> DNA
<213> Homo sapiens
<400> 1537
ggcacgagct ctatctggga tagagttaat gagggctgca aaaatagcat cttcatggaa
                                                                    60
aaacagggac aaatttgtgg atgcaagatt ccagccctta gaagttcttg gcatagtaaa
                                                                    120
                                                                    180
tgtttaactt aataaatttt ctatgcctta gtaatggaat ttcctgcttt ttgggaaata
                                                                    240
tatgcattta ttatttctgc tcctgtgttt cacatgcaaa taatacagaa aggagcaaga
                                                                    300
tggacaaaga tcttgctgtc ctacaattta catctaatgg gaggagacat cccacatata
acctaagttt taaaaacaaa tgatgaattt taaatgattt taattgtttg cgattgcact
                                                                    360
                                                                    420
gctttttggt gcacccgtct agattcaata ttgcatttta tgtgttcatt tgtttcgatc
agacaggcat tttgaggagt aaatgtatgt ggttgtgtat aaggtattgt cacagaattt
                                                                    480
cccttctctt taaaattatt cttttgaggg gaattttgca ttcgtgctaa ctgactggca
                                                                    540
tgtacagatc gggagccttt tctattttct ctgattgctt tagattttct gtatcaaaac
                                                                    600
ttgaacagat cttgagcagc gtttagtact tttatgtaca acctactggt cttgagagtc
                                                                    660
tctgatggtg aaattggact aagttagatt atgtaaatct agagcccttt gagttagtct
                                                                    720
                                                                    780
atcttttctt tttcagactt cacagcagca aatgtttatc acctcttgaa aagaagcatt
                                                                    840
agtgcttcaa ttaatccaga agatagtact ttccctggta agtataataa actcctcttt
                                                                    900
tctctggcac agcatttgta ctggaaatta acttaattaa tttggaccct aaggagtaca
                                                                    930
aggaaatact tcaaaaaaaa aaaaaaaaaa
<210> 1538
<211> 580
<212> DNA
```

| 400 1530 | | | | | | |
|-------------------------|------------|------------|------------|------------|------------|------|
| <400> 1538 | 22444444 | | agaattagaa | attacaacct | aacataaaat | 60 |
| | | cccagcccaa | | | | 120 |
| | | cactcctgcc | | | | 180 |
| | | tctctttcct | | | | 240 |
| | | cgagagccat | | | | 300 |
| | | gtggtgctgg | | | | 360 |
| | | ggacccttcc | | | | 420 |
| | | cagctgtcct | | | | |
| | | gaaggaccct | | | | 480 |
| | | taccagccc | | aattcagctt | tttttttaat | 540 |
| gtgagaaaat | aaatgcaccc | ctctctggtt | taaaaaaaaa | | | 580 |
| <210> 1539 | | | | | | |
| <211> 1339 | | | | | | |
| <211> 1224 <212> DNA | | | | | | |
| <213> Homo | ganiong | | | | | |
| <213> HOIIIO | saprens | | | | | |
| <400> 1539 | | | | | | |
| | acagaagaca | ggcacgcggg | ccataactcc | ctagacagaa | gccgagcact | 60 |
| | | gcggtgtggc | | | | 120 |
| | | cccggcctgc | | | | 180 |
| | | tgtggggagc | | | | 240 |
| | | tcccactttt | | | | 300 |
| | | tctctgttcc | | | | 360 |
| | | gcggcacagt | | | | 420 |
| | | tggctgcaca | | | | 480 |
| | | atgattcacg | | | | 540 |
| | | gtgctgagcc | | | | 600 |
| | | atgcaagcac | | | | 660 |
| | | cagtataagt | | | | 720 |
| | | cactgtaacc | | | | 780 |
| | | ttagcagagc | | | | 840 |
| | | tggtggctag | | | | 900 |
| | | caattctaca | | | | 960 |
| | | ttgttttaag | | | | 1020 |
| | | ggacagtgaa | | | | 1080 |
| | | ccatttctat | | | | 1140 |
| | | aatctccaaa | | | | 1200 |
| | aaaaaaaaaa | | gcaceceaa | agaacaaaca | ccaacggcag | 1224 |
| | | * | | | | |
| <210> 1540 | | | | | | |
| <211> 1448 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1540 | | | | | | |
| | | aagaataatg | | | | 60 |
| | | ccatgaaggg | | | | 120 |
| | | actgatgtgc | | | | 180 |
| | | ttcccagtac | | | | 240 |
| | | cattgagact | | | | 300 |
| | | tggttctcaa | | | | 360 |
| | | atatctactt | | | | 420 |
| | | aaaccagttg | | | | 480 |
| | | tagtatttaa | | | | 540 |
| | | ggtaactaag | | | | 600 |
| ~ | _ | atttagtggc | | | | 660 |
| | | tttagaaagc | | | | 720 |
| | | agcctcactc | | | | 780 |
| | | tcactggttg | | | | 840 |
| cagctgggtg | ctccctgcat | ggcctggctg | ctgactggac | cactgacatg | attactgtca | 900 |

| tatccaaggg gggaaggcac cgtctcsccc tatgaaaaac argcccargc gaaacaccgt tcccagccac | gagaggctca ctaragtttg tacaatgcaa cctggctggg gggtggatcc ctttactaaa tcgagagatt | ccaagctgcc tacgaaggat tcacagcttt atgctttgtg cactgtggct cttgaggtca aataaaaaaa gaggcaggag tgcactccag | tggataccaa tttttttaa tacaagtaaa tatataaacc ggagttcaag ttagccaggc aattgcttga | gargtgcggg ctgaatctct aagaaaaatg tgtaatccca tccaaccagg atggtggcat acctgggagg | tggggctaat ttaaattggt gctctcacaa gcactttggg ccaacatggt gcgcctgtgk tagaggttgc | 960 1020 1080 1140 1200 1260 1320 1380 1440 1448 |
|--|--|--|---|--|--|---|
| <210> 1541 <211> 1143 <212> DNA <213> Homo | sapiens | | | | | |
| <400> 1541 | | | | | | |
| | cgcgaggcag | ggagcttcca | ggttatagca | atggagetta | ccatctttat | 60 |
| | | tcctgacatt | | | | 120 |
| | | aatggttccc | | | | 180 |
| _ | | agaagcggga | | | | 240 300 |
| | | tgctggaagt aaaaaaaaag | | | | 360 |
| _ | | aactcctggg | | | | 420 |
| - | | tgagacagtg | | | | 480 |
| | _ | gttattctta | | | | 540 |
| | | ttctgcccag | | | | 600 |
| | | cagttctcaa | | | | 660 720 |
| | | ttgaggtggt gtaggcaatg | | | | 780 |
| | | agagccccta | | | | 840 |
| | | ttcttatcta | | | | 900 |
| | | ctgtgaaaat | | | | 960 |
| | | attttctgca | | | | 1020 |
| | | gtaaaagtac | | | | 1080 |
| | ttaggaacag | aaaaaaaaa | aaaaaaaaa | aaaaaaaaaa | aaaaaaaaaa | 1140 1143 |
| aaa | | | | | | 1143 |
| <210> 1542 | | | | | | |
| <211> 1589 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1542 | | | | | | |
| | | tttatagacc | | | | 60 |
| | | aatttccatc | | | | 120 |
| | | agtgattttt | | | | 180 240 |
| | | ctgttaggca tattaaggga | | | | 300 |
| | | gaagtttagg | | | | 360 |
| | | actctatagt | | | | 420 |
| | | tgtgttttct | | | | 480 |
| | _ | tgtacttaac | _ | _ | | 540 |
| - | | ctctgttttt | - | | | 600 |
| - | · | cagttgttat | | | | 660 720 |
| _ | | gatttttagc tgttatttca | | | | 720 780 |
| | | ctcaaaacaa | | | | 840 |
| - | | gacactggca | | | | 900 |
| caactaggag | gcagtagaac | tgggatttaa | acttagactg | cctgtagagg | ccatgttctt | 960 |
| aaccactact | agatttttgg | cgtccagatg | tcccttgtat | ttctaacttc | cgtttagttw | 1020 |
| | | | | | | |

```
ttctacctcc aattcaatac atccattcag ttaatctcaa gtgcctgcct ctttcccttg
                                                                     1080
  caaaacacac ttgctcattc tttattcctt gccacattaa agktaacact atcctccca
                                                                     1140
  tcgctagkac tatagaggyc attgaaccyt ccccctgcgt atggcctgtg agttttattg
                                                                     1200
 attccagcat gattatttgg tgatatttga gtgcgatttt gtgctagatc ctgggtgtat
                                                                     1260
 aatgatgtat gagacacaga ctttgtcctc agggagctta tactctagaa ataattttt
                                                                     1320
 tttttcaaga gagcgtccta ctctgttgcc gaggctggag tgcagtggtg ccaacatggc
                                                                     1380
 ttactgtagc ctcaggctcc cgagctcaac tgatcctcct gctgcagcct cccgagtagg
                                                                     1440
 tgggactaca gacatggact atcacaccaa gctgttttta tttttagttc aggtgggttc
                                                                     1500
 tcagtttgtt gcccaggagt tggagaccag cctgggcaac agtgagaccc tgtatctaaa
                                                                     1560
 aaagaaaaa aaaaaaaaa aaactcgag
                                                                     1589
 <210> 1543
 <211> 831
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> SITE
 <222> (53)
 <223> n equals a,t,g, or c
 <400> 1543
 ggggaaccaa aagcttggag gttccaaccg ggggtggcgg ccggttctag aantagtgga
                                                                      60
 tcccccggg gttgcaggaa ttcggcacrr tgagggtgag caagaagaag actggaaatg
                                                                     120
 ccatccctct gtcaccaatc cacagtgggt ttggggagga ggcatggcca acatccactg
                                                                     180
 ggctgcacag acagttttat tactacccca cctggctcct gccttctggg gccctgcagc
                                                                     240
 ccatgaatta atccctttcc aggctagcct ggggtacatc catccccttt ggctcctaac
                                                                     300
 ccatggagtc aagcctcggg cacatttctc ctaccagcct ggtttgggcc atatctatgt
                                                                     360
aatgettttg cetteattta ettaggttge teeettaaac aggeteacat tetaaacata
                                                                     420
acctetgeet ectaageaaa taettatatt cataaattae teecacetga accaceacca
                                                                     480
ctgccaccac ccacaggatt cctgggcttc cttgcagcat agataaaagc ttttttgggc
                                                                     540
atccacttac caggcactgg gtgggagcag gcagcagggc acatcctccc tccttggaag
                                                                     600
caatatttac tcagcaattc tccactcagc agtgtaaatc actgtggctt cccagcaggc
                                                                     660
atatgatete tgeetggteg ggtttetete cetttteeat gaetgaatet gaageteaag
                                                                     720
cccctttccc cacagcctct cccacatatg cctggaaact gaggtctggc tcatccttca
                                                                     780
gggageteca tgetteeetg gtaaggtaaa aaaaaaaaaa aaaaaetega g
                                                                     831
<210> 1544
<211> 784
<212> DNA
<213> Homo sapiens
<400> 1544
ggcacagcag aagtattaac ttgttcaaat cgtacaacca aggctcaagt ccatgattgc
                                                                      60
ccaactccaa agcccatgtt ctttctacct tattatgttg gcattgtttt caatgtcagt
                                                                     120
ttggacccat ataaaaacgc ccagctgtac cctatgagga ggatataaaa atgtgagatg
                                                                     180
gtagttgaca ctcggaggac attcatatct ccaaacccaa ccttatgaag ttggccacag
                                                                     240
caagcatgtt ggaaactaga accaggggtt tcatatcaag ccatttgctt aggtctgtat
ctcaaaagct ttaaatacaa ctttttttgg tgccctcttg ataaggagtc ttatactgag
                                                                    300
                                                                    360
ctcttcttcy ctttwatagc tggtccaycr gaaagattaa attaaacgtt tggccacatg
                                                                    420
gacagttaat ccttagatca cccagttgga tggttcattc ctgctatgtt tggtttgatt
                                                                    480
tttyattttt ggaaaacaaa tagtgagtca gtctgctttc cctccctttc tctgcctcac
cactcettet ggattetett agatgetetg gteatactag gtaaacagta ttttettaa
                                                                    540
                                                                    600
aattttcctt gagccatgac agaatcatga gagagctccc ctggctctga tacttaatgc
                                                                    660
ccccctctaa aaagaaaggt ctatttgagg ctattcactt ttgtcatctt gaaagagtct
                                                                    720
780
cgag
                                                                    784
<210> 1545
<211> 1178
```

| <400> 1545 | |
|--|------|
| | |
| ggcacgagcg gtggattcct gagcattcaa tacacatgag gactcccaag ttcaaactgg | 60 |
| cccacttagg attctgggtc tcacagtcca cacagtgggc gttcccacgc atgttttgga | 120 |
| tcgactgcag ggccatggcc tcgctctggc tggtcagctg ggacttgctt ttactgctct | 180 |
| cgcatgactg caggctggcc aggatctggc tctggatggc ttggacccag gcatcccgct | 240 |
| cctcatacgt cgtggcttca aagtgccatg tttggccagt ggcagacaca atcataaagt | 300 |
| tgttggtgct tttcttcttt aggtgtttct ttattggc atgaggagag ggggggggt | 360 |
| tgagcttggg gctggtggtg ctggagatac tggggctgaa gcatatggag tcacccagcc | 420 |
| cggtgtccat gtccttggat aggccattgc ttttagagct ggagatggt gcacaggcg | 480 |
| atgtggctag ggatggccac tttcctggga ctttgatggt agatgtccga aggtcaatct | 540 |
| ctttttatg aatattcttc atataatcac ctaagcttga ataataggtg agcacgccat | 600 |
| tggaacacag ggtgacgtat ttctttttcc atggettga attataggtg agcacgccat | 660 |
| agagcatgcc ctgtttaatg gggatggctc tgccgctccc gatggtgtca gcatgattct | 720 |
| coggggettt cetetettt tetgggtea tecetttete agatgtaaac aggttggace | 780 |
| agcgcatgga ccgcttgcaa acgggggtgg gtggttggttggc agtgggagga acactgaact | 840 |
| 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 | 900 |
| and a contract of the contract | 960 |
| James | 1020 |
| cttttaaaaa gatacatttt ctgggccagg catggtggct cacacctgta atcacagcac | 1080 |
| tttgggaggc caaggtgggt ggatcacgag gtcaggagtt caagaccatc ctggccaaca | 1140 |
| tggtgaaacc ctgtctttac aaaaaaaaa aaaaaaaa | 1178 |
| <210> 1546 | |
| <211> 1579 | |
| <212> DNA | |
| <213> Homo sapiens | |
| See Home Suppens | |
| <400> 1546 | |
| | |
| tgattgtatc tgaagatcct gagctgccgt acatgcgacc tcctctttca aaagaactgt | 60 |
| ggttttcaga tgacccaaat gtcacaaaga cactgcgatt caaacagtgg aatggaaaag | 120 |
| agagaagcat atatttccag ccaccttctt tctatgtctc tgctcaggac ctgcctcata | 180 |
| ttgagaatgg tggtgtggct gtcctcactg ggaagaaggt agtacagctg gatgtgagag | 240 |
| and a succession of the succes | 300 |
| | 360 |
| s mining of the against a trying and the against the a | 420 |
| Simulation concentrate continued the constant and the continued of | 480 |
| ssinguage decigageett gggedeadaa gegatteaac tetteceega gaaagaatt | 540 |
| and the same and t | 600 |
| sassitudes esacected telefactore contractores temperature | 660 |
| | 720 |
| - 33 33 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 | 780 |
| ggcttccggg taaatgcaga gctacaagca cgctctaaca tctgggtggc aggagatgct | 840 |
| gcatgcttct acgatataaa gttgggaagg aggcgggtag agcaccatga tcacgctgtt | 900 |
| gtgagtggaa gattggctgg agaaaatatg actggagctg ctaagccgta ctggcatcag | 960 |
| tcaatgttct ggagtgattt gggccccgat gttggctatg aagctattgg tcttgtggac | 1020 |
| agtagtttgc ccacagttgg tgtttttgca aaagcaactg cacaagacaa ccccaaatct | 1080 |
| gccacagagc agtcaggaac tggtatccga tcagagagtg agacagagtc cgaggcctca | 1140 |
| gaaattacta ttcctcccag caccccggca gttccacagg ctcccgtcca gggggaggac | 1200 |
| tacggcaaag gtgtcatctt ctacctcagg gacaaagtgg tcgtggggat tgtgctatgg | 1260 |
| aacatcttta accgaatgcc aatagcaagg aagatcatta aggacggtga gcagcatgaa | 1320 |
| gateteaatg aagtageeaa actatteaac atteatgaa actgaageec cacagtggaa | 1380 |
| ttggcaaacc cactgcagcc cctgagagga ggtcgaatgg gtaaaggagc attttttat | 1440 |
| tcagcagact ttctctgtgt atgagtgtga atgatcagt cctttgtgaa tattttcaac tatgtaggta aattcttaat gttcacatag tgagataagt cctttgtgaa tattttcaac | 1500 |
| tatgtaggta aattettaat gtteacatag tgaaataaat tetgattett etaaattaaa aaaaaaaaa aaactegag | 1560 |
| | 1579 |
| <210> 1547 | |
| <211> 954 | |
| <212> DNA | |
| · | |

<213> Homo sapiens <400> 1547 caggaattcg gcacgagaaa aatgtgggga aatgctttaa aaaaatagca aaatgtgcaa cttcttacaa aaattgttaa cgttaggtac ttctatatat tttatatgac cataatgtcc 60 gtgtgtgttt tgtaccttca gtcccttgtt attgttccgt atattacctg taagcagata 120 180 ctgtatttta ttttagccta tttgacagaa cacatcactc agaaaaagtg aagtttcaga 240 gcaaacagtg aagaaatcag tgtgattgta gacaaaaagt cggttcacag aacggagcag 300 cggggagagg aagggaaaag cttcatagtt tggtgcttat cacatcaaga gattggtaaa tttctgagga aagacaggct aatggggcac tgaaatggaa caactccttt aaacgtgcag 360 420 ccttttgaat ttttcctcaa aaccaagaag ttgacctctg agctgtcagg tgaccactgt 480 gtgcaaaggg gatggattet ettgtcagta gaeggtette tecatgaage gagagtagga 540 agtgtactgg aatggccaag tgggactgct tcagctgacc aggttctttt aaaccgtagt 600 catgetttee cactaactet taaateetta tgettagaaa attgaggata aggetgggea cagtggctca ggcctgtaat cccagcactt tgggagacca aggcgggtgg atcacaaggt 660 caggagatcg agaccatcct ggctaacatg gcgaaacccc gtctctacta aaaatacaaa 720 aaaatagctg ggcgtggtgg cgggcgcctg tagtcccagc tactcaggag gctgaggcag 780 840 gaggatcact tgaacatggg aggcggaggt tgcagtgagc caagatggcg ccactgcact 900 954 <210> 1548 <211> 1563 <212> DNA <213> Homo sapiens <400> 1548 ggcacgagaa gatggcagcc cccatacctc aagggttctc ttgtttatcg aggtttttgg 60 gctggtggtt tcggcagcca gttctggtga ctcagtccgc agctatagtt ccagtaagaa ctaaaaaacg tttcacacct cctatttatc aacctaaatt taaaacagaa aaggagttta 120 180 tgcaacatgc ccggaaagca ggattggtta ttcctccaga aaaatcggac cgttccatac 240 atctggcctg tacagctggt atatttgatg cctatgttcc tcctgagggt gatgcacgca 300 tatcatctct ttcaaaggag ggactgatag agagaactga acgaatgaag aagactatgg 360 catcacaagt gtcaatccgg aggataaaag actatgatgc caactttaaa ataaaggact tccctgaaaa agctaaggat atctttattg aagctcacct ttgtctaaat aactcagacc 420 480 atgaccgact tcataccttg gtaactgaac actgttttcc agacatgact tgggacatca 540 aatataagac cgtccgctgg agctttgtgg aatctttaga gccctctcat gttgttcaag ttcgctgttc aagtatgatg aaccagggca acgtgtacgg ccagatcacc gtacgcatgc 600 acacceggca gactetggce atetatgace ggtttggceg gttgatgtat ggacaggaag 660 atgtacccaa ggatgtcctg gagtatgttg tattcgaaaa gcagttgaca aacccctatg 720 780 gaagetggag aatgeatace aagategtte ecceatggge acceetaag cageecatee 840 ttaagacggt gatgatccct ggccctcagc tgaaaccaga agaagaatat gaagaggcac 900 aaggagaggc ccagaagcct cagctagcct gatgacaaaa atgacttcta gggtgaagcc 960 tgggtgatga ggctgctgga agctttgaag tctcccattc ccctcatgct ataaaaagaa ctacctttgt tctctcccat cctgctcagg tcttttcagc agtctcatca tcagcaacca 1020 tgactgatga ctgggcccta gcaggtggca ggtataacat ggccatggac actcttcttt 1080 1140 tttaaatttt atgtctagct tctgagtcta gatgaaaaga cagtatgttt cagagaacat tgggatatca gttttttccc acagcaggga ctgtgagaga caaccagcag catcctcttt 1200 gtaatcacag ggcagggatc agagtttgaa atgaaatgtt gtcagggtgt tggaaaaatt 1260 ttggtgagtt ctgcacattt cccctggttc aggctgggca tggaccagcc ttcagatggc 1320 agaagtggaa gatgagccta cttgtgagcg atgtgacttt aaggaaatga agactgggga 1380 1440 agaataatta gtgtttataa gacatttaag aggccctttt tcatatactg actcactgat gaatcagcat ttgcatttta tggaaaaata taaatccaaa gaaataaaaa aaaaaaaaa 1500 1560 aaa 1563 <210> 1549 <211> 1847 <212> DNA <213> Homo sapiens <400> 1549 cccacgcgtc cgcaggatgg agtgcagtgg cacggtctcg gctcactgta atctccacct 60

<222> (791)

<220> <221> SITE <222> (1019)

<223> n equals a,t,g, or c

<223> n equals a,t,g, or c

```
ctcaggttca agtgattctg ctgcttcagc cgcacgagta gctgagatta ctggcatgtg
  ccaccatacc cagctaagct cttttctatt aaattttttt tctgagtttt caactctttt
                                                                        120
                                                                        180
 ggttttaact gccatttcta tgttctgttt ctctctggta acctacgcct agacctcctg
                                                                        240
 gaaaacagta aatgggccac acaagcaata ctactactgt gatatactga aaacctgtat
                                                                       300
 gcagccattt agcacacttg aacatacaat tttactcyta ttttctattt gtccattttc
                                                                       360
 atteteaact aagttggaag etgeetaggg ataggagega tgtataatte eeeteactga
                                                                       420
 gtcccagccc aatgctgacc tcatactagg tattcaatag ggtactacaa acaagatttg
                                                                       480
 tcatccagca agcatgggaa atgttttaaa aacatgatac cctcactctt acaaaagcct
                                                                       540
 tcaaaattac cagaagataa tattgttact gccaaaaagc aattcatgtt tacttagagc
                                                                       600
 ttactaaatg tcaaactttg agctctaccc tttacagaga gtctcccatt taatcctcac
                                                                       660
 agcaacccca tgaggtttgg agaggctaaa taactcactc acatagttac agtcaagtgg
                                                                       720
 cgtagctgat tcagtctaca ctcgatcagc ccatgaattc aaaaatttaa gatcccccaa
                                                                       780
 atatttctta acagtatagg taagaagtat agtgatttga aagaactgat ttaaagtaac
                                                                       840
 tcctcacctc tcagccctta cctatgcagt ttcccttgta ggaacaccac cttcgtccca
                                                                       900
 cctctctact ggcaaattgc tacacatcct taaagtcacg gcaagcactc cccaactccc
                                                                       960
 ctcagcagca ctcccactgc acctggcact cactgccatt ctatctacct cctgctctag
                                                                      1020
 tccatgtgtc tgtttattat ttaccaggag aatctgagct ccatggggtt gagaaccttg
                                                                      1080
 ccttttcacc tccattccca ggtttctagc acagtaccta ccacacaca aagtgtacag
                                                                      1140
 taaatatctg ttcttgaaat cattattgtg gtagcattaa gagacttagt ttgcaacatc
                                                                      1200
 tatctttcac agcagatctg tatcacaatc tacaccataa ctttcaacaa ttcatatttg
                                                                      1260
 tttccatagc aactagggaa agtgctcctt ataatactag gaaaggcaag ctctacctta
                                                                      1320
 aggttcaacc cactgaaata cttcacaatc acttgctttt tgttcttagt gtgaagagac
 agaatgacag cattttaact ttacgtcttt aagaacacct taactttaat aatgacagta
                                                                      1380
 aagcttattt tttcataagt actagagttt tcattgacaa aaggacagca tcttattaat
                                                                      1440
 tracaaatrt aaaataccet taagagteea ggtgetgtgg etcacacetg taateceage
                                                                      1500
 actttgggag gctgaggtga gaggatcact taaggccagg agtttgagac cagcctgggc
                                                                      1560
 aacacagtga gaccctatct ttacaaaaaa ttttaaaaat tagctgggta cggtagcacg
                                                                      1620
 tgcctatagt tccagctact cgggaggctg aggcaggagg attacttgag cacaggagtt
                                                                      1680
 taaggetgea gtgageeatg gttatgeeac egeactgatg eetgggeaac agagegagae
                                                                      1740
                                                                     1800
 tctgtctcaa aaaaaaaaa aaaaaaaaa aaaaaaa
                                                                     1847
 <210> 1550
 <211> 1391
 <212> DNA
 <213> Homo sapiens
<220>
<221> SITE
<222> (782)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (788)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (789)
<223> n equals a,t,g, or c
<220>
<221> SITE
```

```
<220>
<221> SITE
<222> (1021)
<223> n equals a,t,g, or c
<400> 1550
ggtcgaccca cgcgtccgcc cacgcgtccg gtatgacata aattttcctt ccttttactt
                                                                    60
tcagccttca aatatttgaa ttcagtttct tgttgacatt tgggtcatgt ttgttgctgt
                                                                   120
wtttttgttt tgctttgttt tttgtaaatt tcactctgcc atctctgttt ttaattagta
                                                                   180
tatttagagt gcttatattt aatgtaatta ttgatatctt agggtttata tttgccattt
                                                                   240
                                                                   300
tatttttctt ttctttttt acctctgttt cttatttctc tttttataat cctgctttcc
                                                                   360
tgtggattac ttgaatatac ttttaaattc cattataatt tatctatagt gttttatatg
                                                                   420
tatttctttg taggcktttt ttagtagttg ttcttcatat tacattatag ataacttatt
gccatctatt ggcatctgat cataccattg tctgtgaagt gaaaaacact taccttctkg
                                                                   480
cagattettt tggtettttt tatttagaag ataattatet taaatattte atetttatat
                                                                   540
atktagttat ataatctttg cttcaaccat taggtatgat ttagaaatct caaaagaaga
                                                                   600
                                                                   660
agaaacctac tgtgtkcccc atagttaaac tcactctgat cttcttttct tcctgatctt
                                                                   720
ccgagatatc ctcttttatt gtkttctttc tgtttagaga tgtttcttta actgttctct
                                                                   780
taggataagt gttttggtta caaatctcag aactcttagg gtttttgttt ctttctttt
tntttttnnt nagttttgtt ttaaacgtga agatttcttg atttcccctt cattcttaaa
                                                                   840
                                                                   900
ggatattttc atgatagaat tctgaatggg actgccccc tgcctacttt tttttttttg
                                                                   960
ctatacttga acaatattat gccacttatc ctggaactcm cagattttta tgagaaatct
                                                                  1020
actctcattt gaattcccat ttttctatca ttgcctctaa gattttttta atccaatana
                                                                  1080
naatacaaag ttttagcaaa aacatggtaa attccagcaa gaaatagaag atacaaattt
gtttttatta ggagttatta tatatttatg gcatgttcat cctgactagg gaaatcgcaa
                                                                  1140
atcctccttt aatatccatc agccatcaaa attatttaat atataaaaca aaattattta
                                                                  1200
agatataaaa gacaatcaca tggatatttt caaattataa atatgataac tgaaataaaa
                                                                  1260
                                                                  1320
aatctaaagg agggctcaaa agcaaaatgt aggtgatagt gagaagtagc aaagaacttg
                                                                  1380
1391
<210> 1551
<211> 1272
<212> DNA
<213> Homo sapiens
<400> 1551
                                                                    60
cccacgcgtc cgggatgctt tttgccagca atgtgagaaa aggtgctctt ctgggagaga
ggaagagacc caggcaattt attatgaatg ctccccgttg tatggataat cctgtgctcc
                                                                   120
                                                                   180
tctgcccaat tcccgcacct ctggaaactt cattcacatt tggcacagat gagccactcc
teceteette eeettgagaa tegttetetg ageetgtgea gaacaaggtg eteegateet
                                                                   240
ctatcttgca cactggctcc tttcctcccc ccaactgtct ccctgtccac cctgtcgtcg
                                                                   300
gctctccagt cctccttctg tagtttcttc ctcagaagac agtgtcgccc ctcatgctca
                                                                   360
cctgtaccag gggtccatat ttctaacttt ggaagtgcct cctggacatg tccatgtggt
                                                                   420
tgcctggcca tccactcaaa tccagcctct ccaaaaggaa tgattctccc ctacttcctt
                                                                   480
ctcacacaat tgtgtggcca gagtagccgg accaatggct ccaaactacc cccaaatact
                                                                   540
cateceegee teamtgettg ggeeecettg getteeeeta gggeagetea cateaaggte
                                                                   600
cagettggat eggageteet acaggaaget teeccageee tgetetgteg gagaactett
                                                                   660
ctcctccata ctamctctcc cattctgtgg caggctcttc tttaycctca ggcttcagyt
                                                                   720
cagacwtccc tcacctgcta ggccacagca gctcctgagt agctgggatt acaggcaccc
                                                                   780
gccgctgcta atttttgtat ttttagtaga gatgggggtt tcaccatatt ggtcaggctg
                                                                   840
                                                                   900
gtctcgaact cctgacctca ggtgatcaac ccaccttggc ctccctaaat gccgggatta
                                                                   960
caggcatgag ccaccgctcc cagcctttga ttttttaagg tggattttgg ttgttataaa
                                                                  1020
tggagaaagg taagagttca agttcaaccc gtgtgtgaaa gcaaaacaat ggaaaacagg
                                                                  1080
attggcttct tcaaaggctc ctcttgtaga actgcctctt tgaaatttcg aggtaatcta
ctttggagac tctgcctgga gagggtcagt tcctaagtta aaagcatcgc ttaaccttgg
                                                                  1140
                                                                  1200
ctcctgtggc attttacaaa ggtttaaagg aattgattcc tctgaaaggg cctgaaaata
1260
aaaaaaactc ga
                                                                  1272
```

<210> 1552

```
<211> 2008
 <212> DNA
 <213> Homo sapiens
<220>
<221> SITE
<222> (1936)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1977)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1978)
<223> n equals a,t,g, or c
<400> 1552
cccacgcgtc cgccgagttc agcatctgga cccgggaggc tggcgctggg ggcctgtcca
                                                                        60
ttgctgtgga gggtcctagc aaagcggcag attgcatttg aggatcgcaa agatggctcc
                                                                       120
tgcggcgtct cctatgtcgt ccaggaacca ggtgactatg aggtctccat caagttcaat
                                                                       180
gatgagcaca teccagacag eccetttgtg gtgeetgtgg ecteeetete ggatgaeget
                                                                       240
cgccgtctca ctgtcaccag cctccaggag acggggctca aggtgaacca gccagcgtcc
                                                                       300
tttgccgtgc agctgaacgg tgcccggggc gtgattgatg cccgggtgca cacaccctcg
                                                                       360
ggggctgtgg aggagtgcta cgtctctgag ctggacagtg acaagcacac catccqcttc
                                                                       420
atcccccacg agaatggcgt ccactccatc gatgtcaagt tcaacggtgc ccacatccct
                                                                       480
ggaagtccct tcaagatccg cgttggggag cagagccagg ctggggaccc aggcttggtg
                                                                       540
teageetaeg gteetggget egagggarge actaceggtg tgteateaga gtteategtg
                                                                       600
aacaccctga atgccggctc gggggccttg tctgtcacca ttgatggccc ctccaaggtg
                                                                       660
cagctggact gtcgggagtg tcctgagggc catgtggtca cttatactcc catggcccct
                                                                      720
ggcaactacc tcattgccat caagtacggt ggcccccagc acatcgtggg cagcccttc
                                                                      780
aaggccaagg tcactggtcc gaggctgtcc ggaggccaca gccttcacga aacatccacg
                                                                      840
gttctggtgg agactgtgac caagtcctcc tcaagccggg gctccagcta cagctccatc
                                                                      900
cccaagttet ceteagatge cageaaggtg gtgacteggg geeetggget gteceaggee
                                                                      960
ttcgtgggcc agaagaactc cttcaccgtg gactgcagca aagcaggcac caacatgatg
                                                                     1020
atggtgggcg tgcacggccc caagaccccc tgtgaggagg tgtacgtgaa gcacatgggg
                                                                     1080
aaccgggtgt acaatgtcac ctacactgtc aaggagaaag gggactacat cctcattgtc
                                                                     1140
aagtggggtg acgaaagtgt ccctggaagc cccttcaaag tcaaggtccc ttgaatccca
                                                                     1200
aaagtgcctc cccagcctca gcccccacct ccagccacac acacattaca cacacacac
                                                                     1260
cacacacaca aatgtgccac acccagacac gcacagaatc agacactaca aacacctgcc
                                                                     1320
ttgggggtga agtgaaggcc cagcctcccc accccaccgc gccccagggg ttggaggacc
                                                                     1380
ttgtctgtgt caggacagtg tccctccctg ggaatgtgac atgagggccg actggggcca
                                                                     1440
ggctcagggg cagaggctgg gacacaaggg gctggcgagg gctgcgaggc cagggaagcc
                                                                     1500
ctgagtttct ggcggggctg agcagtgggg gagcattgtg ttgtgggtgt ctgtgtgtga
                                                                     1560
ggtcaccete aaactgcace geeggeeaga tacceteetg acceegagga ettggtetgg
                                                                     1620
tetetetggt ggetacaace ecagagtttt aaggaettgg aaaggaaage acaatcagag
                                                                     1680
aagaaaacag cccccgaacc agcaggagtg gcctggcaca tggaccggcc tgagcgatgt
                                                                     1740
gcactccacc caagccaggc tcccaggggg cctgatttct ctctcactgt ctctttttt
                                                                     1800
aaaatggttg cacggctctg ccccatgggg ggcctttttt acacactgcg aggcccagct
                                                                     1860
ttctagggga cttttgcaca tgtcatgcag ctcagctggg agctgcttag gtggaaaact
                                                                     1920
ccaaataaag tgcggntgtc gcaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaannaa
                                                                     1980
aaaaaaaaa agggcggccg ctctagag
                                                                     2008
<210> 1553
<211> 772
<212> DNA
<213> Homo sapiens
<400> 1553
```

| | gatttttta | | - | | - | 60 |
|---|--------------------------|------------|-------------|------------|------------|--------------|
| | cctgaacatg | | | | | 120 |
| | gtacacttgg | | | | | 180 |
| | ctgtctataa | | | | | 240 |
| | gtaaggactg | | | | | 300 |
| | tggtgcccaa | | | | | 360 |
| | gacttggcag | | | | | 420 |
| | tgctcttttc | | | | | 480 |
| | atgctccagt | | | | | 540 |
| | cttcttttag | | | | | 600 |
| | tttacattct | | | | | 660 |
| | catgtccact | | | | - | 720 |
| ttttaacctg | ccaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aaaaaaaaa | aa | 772 |
| -010- 1554 | | | | | | |
| <210> 1554 | | | | | | |
| <211> 822 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1554 | | | | | | |
| | aaggcaaaac | tgagactcat | agatataata | tttgagagtg | aaatotttta | 60 |
| | gatcacatag | | | | | 120 |
| | gacctttggg | | | | | 180 |
| | ttatggaaaa | | | | | 240 |
| | attatatcag | | | | | 300 |
| | ttcatgacca | | | | | 360 |
| | ttagctgctt | | | | | 420 |
| | agtgacagtt | | | | | 480 |
| | gtgtctttaa | | | | | 540 |
| | tcgtgttgtt | | | | | 600 |
| | aagcatgtaa | | | | | 660 |
| acttaacacc | tataatctca | actactcaca | aggetgaggt | agacycayty | gggcacageg | 720 |
| gaaatccaa | ctgcagtggg | ctatgattgc | accccacacac | ttactacact | ctegaggega | 780 |
| | gaagctctgt | | | | ctacccttgg | 822 |
| 333 3.3. | 33 | | | | | OZZ |
| <210> 1555 | | | | | | |
| <211> 1488 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1555 | | | | | | |
| | acatgtccac | | | | | 60 |
| acagaactct | taatttctac | ccacgcccta | acctacacaa | acactggaaa | ctgtccatct | 120 |
| | cttatctcaa | | | | | 180 |
| acctcacctt | ccacatccaa | actatcaaaa | gctcctcctg | ttttatgccc | aatcagatat | 240 |
| | cacctcttc | | | | | 300 |
| | actactacat | | | | | 360 |
| cagttcattc | ttacagagaa | tctagaaaaa | gctcttcaaa | agcaacaatc | agatgtcact | 420 |
| testases | ctaaaaactt | ttaaagagga | cctcttcttc | tgccagtata | acagactttg | 480 |
| tactccaaag | gatatctctg | ttgcatttta | gaactcctag | gaagtaatga | aaatatctaa | 540 |
| | acaagtagct | | | | | 600 |
| | tcccttgtgt | | | | | 660 |
| | ccagtttaag | | | | | 720 |
| | aattccagat | | | | | 780 |
| astasaass | gagctttcaa | adadyattat | caaacaagga | aacaaaccac | cgtgagtgaa | 840 |
| | actagcgtta | | | | | 900 |
| tagagtate | agataagaag | adactagact | accttatata | aagaaaaatt | aacttaaata | 960 |
| | aaatggtgaa | | | | | 1020 |
| | ctaaagaaaa | | | | | 1080 |
| L.C.C.C.L.L.L.L.L.L.L.L.L.L.L.L.L.L.L.L | tataataasa | taattaataa | actorcast | | | 1111 |
| | tgtaatggac cagacaaaga | | | | | 1140 1200 |

```
cagaataagc aagcctaact aaagcctatt tagagcgtga aaggcaacaa aaatatgcag
                                                                     1260
 aatggagatg agacaatgtt taaagagatt gtggctcaga atttttcttt ttttttaagt
                                                                     1320
 gaagagtttt atcttttgtg ttttttgttt gtttgtttc tttgttttt tttttactgt
                                                                     1380
 tattatactt taagttttag ggtacatgtg cacgacgtgc agcttcgtta catacgtata
                                                                     1440
 catgtgccat gttggtgtgc tgcacccatt aactcgtcat ttagcatt
                                                                     1488
 <210> 1556
 <211> 1383
 <212> DNA
 <213> Homo sapiens
 <400> 1556
 ggcacgagct tttgtcggac atctttaaag catttttctt tttatagaat ttcacttaat
                                                                      60
 gtccaatact gatttaatga gcttgggttt acacattatc tcttgaagaa aacaaatgaa
                                                                     120
cctttgtgtt ccaaagcaat ccatgtttaa agggaaaaaa ttatgcataa ctctgcccag
                                                                     180
cttcacagta acctttggca ggtgccttag gtcctctggg actcttttcc ttatctgaaa
                                                                     240
aatgaaggac ttggatcagg tgaatggttc ccagctctgc aacttatgtg gctcctcaga
                                                                     300
ggcacacaag ctcttttcca ttatttgcca aataatggag gccctgtctt taactgcagt
                                                                     360
acaactacac aaaatacttg aaactacagt cttcctggtt tttggttgga actgaatcag
                                                                     420
tgcactctag caacacttat ttcttgctgt tcgtaggctt cattatgtgt ttggttaatt
                                                                     480
ttttaaaacm acawtwacwt atyccataat attwcmgctt aattggmara ctgtttcagt
                                                                     540
ctataggatc tgcaggaagg aggagtaata agggattttt gactgagctc ttatggaaca
                                                                     600
gagtetetet aggeecettg teatatetge eettetggge eetggggaaa agttggeate
                                                                     660
cccagttgtg gtgctctcca ggtgccctca ggctgtggtg gagggagctt cccattctct
                                                                     720
ccttcagccc actcaattca gaggctaggg gctgaaagaa gcttctctac aactggctgt
                                                                     780
tcactgggag gttaagggat gaccatccag ccaggccttc ctcaggacat gggagggctt
                                                                     840
atgctttaac atgtgtaaat ccactgcaat aatgactggt tcttttaccc cataaggttg
                                                                     900
agaatttacc tgtaaacatt tttgtctgaa gaatttggat gtaagtgagg gctgggcctc
                                                                     960
tatettatet caettggett eteteageae ageaeettge etgettgtte ttacaeatee
                                                                    1020
tagatgcaca gtaactattt cctaattatt agaaatctat tagaatcaat tgatttcagc
                                                                    1080
tgggcttggt ggctccttcc tgtaatccca gcactttggg aggccaaggc tggaggatca
                                                                    1140
cctgagtcca ggagtttaag accagcctgg gcaacatagg gagaccatgt ctctacaaaa
                                                                    1200
aataaaaaat tagccaggca tggtggtgtg cacctgtagt cccagctact caggaggctg
                                                                    1260
aggcaggagg atctcttgag cctgggaggt cagactacag tgagcaatga ttgtgccact
                                                                    1320
1380
gag
                                                                    1383
<210> 1557
<211> 748
<212> DNA
<213> Homo sapiens
<400> 1557
ggcacgagga aggaacgagg caaggagcta aagcagcgtg cgttcagccc tggggcattt
                                                                      60
tattaatgct tttacgagtt agaagagttg ggataatttg ccatctggag tttctctgcc
                                                                     120
ttgctgatct gagctcagac ctgccaattt accagagata attgataaca ccctgtaaca
                                                                     180
gctgagtaag tagattette tgttttaetg ettttaaaaa aagtttaaag ttttaaaata
                                                                     240
gtataaactt taattgggtt ctttaaattt tgttgttgaa taatgcaatt attatgatat
                                                                     300
tttgtgaata tttgtaaata atgggattct ggaataaatt aatccccgat gatagaaaag
                                                                     360
agttaatgaa cactttctcc atacataaca ctttagcatt caagaaacat aggacttaaa
                                                                     420
tacatatatt aaaaatttag gccaggtgca gtggctcacg cctgtaatcc cagcactttg
                                                                     480
ggaggctgag gcgggcagat cacctgaggt caggagtttg agaccagcct agccaacatg
                                                                     540
gtgaaatccc atctcggcta aaaatgcaaa aattagccag gcatggtggc aggtgcctgt
                                                                    600
aatcccagct actctggagg ctgaggcagg agaatcactt gaacctggga ggcagaggtt
                                                                    660
gcagtgaget gagaetgtge caetgeaete cagtetggge gacagagagg etetgtetea
                                                                    720
aaaaaaaaa aaaaaaaaa aaaaaaaa
                                                                    748
<210> 1558
<211> 1694
<212> DNA
<213> Homo sapiens
```

```
<400> 1558
 gggcctcagg actcatctct gtcttctcca accccagctg gcctccatgt cccctggggg
                                                                        60
 ctttctgctg ctgaccagct tgggccctac tataggtttt cttgctgggc ttaggagcct
                                                                       120
 gagagaggta gccatttcca aaagaaaaga tttctatctc agattatctg ggaaagaggc
                                                                       180
 tgagtaggtc ccttctctga ggaaacaggc agcaggacat aggatggggc agtgggagga
                                                                       240
 aaagggtctg cactatgggg tccttgggct gtgcactcct gaccttatca cttcacagtt
                                                                       300
 cccaccagat ctgacttgac ctccgggcca tgacccagtc cctccccac tctggaaacc
                                                                       360
 tetgtgtece etectgetee tttcactece acetgggagg etetgageag gecagggtee
                                                                       420
 ctctctccag gcctgctcct ccctttctcc tcctgtmccc ccagccatcc ccccagccag
                                                                       480
 gctctcccac ctctggcccc acctcacctc ttggccttct tctttccctc gggcgatggg
                                                                       540
 agcctggttt ggctgcccag ggaagattgt atctgaccac aggagggagg gctgagggca
                                                                       600
 ctgctgggtg agctgaggcc tccttaggtt cttgctgtag tctgagttca agtcatttag
                                                                       660
 aatgagtgac ttgaggaaga gggagctggg agcccttttc accagcaggg ggactggagg
                                                                       720
 agtcgaatgg ggtggggtct tctcgttttg attagcttct ggtggaggtc ccaggctttg
                                                                       780
 gcgtgctcaa gcttggagtg gcagggagca ggcctggctt gaccttcttt ccttcctgct
                                                                       840
 ccctctcctc acccctccct gcagetettt cactccgtct ctctctctac agatgggacc
                                                                       900
 caggtgagee egggtgeeea etaetgeage eecaetggeg eaggtaagag teaaaceegg
                                                                       960
 gggagtccat ggtagggagt ggaagatgag gggtggaaag gctgtaagaa cgcgagaagc
                                                                      1020
 tgaggggtta gagaagcagg gtcgctggct gatctgccag agagccagga ggtggcggct
                                                                      1080
ccagggaggg scgaggagcc ggggtaagag aggcagctct ggatgctggc tgggcacagt
                                                                      1140
gctaggaaac acaacaggaa aaggaaacac aggatgcccg tcttgtcctt gctgggagca
                                                                      1200
gtgaaacagg aaggaaagta agaagctaat atttatactg agacccctac cccatgtcag
                                                                      1260
gcaccaggca aggtgtgttc ttgtgtgtgg actcggtcct cacaccggct ctgcaaggtg
                                                                      1320
ggcatggcag cccttgcagg actgctctgc tggaggggaa gtgttctctc actgtctgcg
                                                                      1380
ceteeteet etgetggeee gageeteete tgetgetagg etgeeetggg gaaggaetgg
                                                                      1440
acttcctgct gctgctttgg tttaggacat gcccatgggg ccaggtctgg actagacgcg
                                                                      1500
gtctgccctt cctttagtgt agccagtatc aaccaagggc ctactgagtg caagatatac
                                                                      1560
agcctgatgc ctaataattc catatagcag ggagaaatgg aacccaggta tcctccttgc
                                                                      1620
ttcagtcctg gctgttgaaa agctwacagg caggttaggg aggaagcaca cacaaataca
                                                                      1680
aaacaaaaaa aaag
                                                                      1694
<210> 1559
<211> 1572
<212> DNA
<213> Homo sapiens
<400> 1559
gatcccttga gggcctgaat aaaataaaag acaaagagag agcaaatttg tactcagctt
                                                                       60
gagettggat ateceteagg ecetecetea ggeettetea teagaetgag atttaacaet
                                                                      120
attagetetg teggeeteea gettgeacae ggeagaetgt gggaetttet ageeteeata
                                                                      180
attgcatgag ccaatccctc ataataaatc tgtttctatg tatctatatt ttgttggttc
                                                                      240
tctctggaga accctgacta aatacactgt ttaagaaagg agtaaaactt gcactgagat
                                                                      300
gtttagagca gctttattca tagtttatca aaatgtggaa gcaatcaagg tgttctccag
                                                                      360
taggggaagg aataaataaa ctgtggtatc tccgtaaaat gggatgttat tccacactaa
                                                                      420
aaagaaatga gctatcaacc atgasaatac atggrggaac cttaaatgca tattactagg
                                                                      480
caaagaagcc attctgaaaa ggctatatac tgtgtgattc caacttcatg acattytgga
                                                                      540
aaaggcaaaa ctatggagac aataaaagga tcagagatgc caggggttgg gaaggagggt
                                                                      600
aaattaatag gtggaacaca ggatttttag agcagtgaaa ctattctgta tgatataaca
                                                                      660
atggtggata catatcatta ttcatttgcc ttaacccaca caatgtacag taatgaaagt
                                                                      720
gtactgttag gtaaactgtg gactttagat gatgatgtgt cactgtaggt tcatccattg
                                                                      780
gaataaatgc accactcttg tgtgggatat tgatagtggg aagactgccc aattaagaaa
                                                                      840
tctgtacttt ctactcaatt ttgctgtaca tttaaactgc tctaaaaaat aaactctgtt
                                                                      900
ttagcctgta accccagcac tttgggaggc tgagggggtg tatcacttaa ggccgggagt
                                                                      960
tcctgaccag actggccaac atggtgaaac cttgtctcta ctaaaaatac aaaaattagc
                                                                     1020
cgggtgctgt ggtgcatgcc tgtaatacca gctatttaag aggcatgaga atcgcttgaa
                                                                     1080
cctgggacgg gggttgccag tgagcccaag atcctggcac tgcacttcag cctgggtgac
                                                                     1140
agagcgagac tetgteteaa aaataaatae ataaataeat aaataaaete tgtttttaaa
                                                                     1200
aatgagcaaa aggccaggca cggtggctca cacttgtaat cctagcactt tgggaggccg
                                                                     1260
aggcgggagg atcacttgag gtcaggagtt caagaccagc ctggccaaca tggcaaaacc
                                                                     1320
ccatctttac taaaaatatc aaaattagcc aggcatggtg gcatatgcct gcagtcccag
                                                                     1380
```

```
ctacttggga ggctgaggtg ggagaatcgc ttgaactcga gaggtggaga atgcaatgag
                                                                       1440
 ctgagatcac accactgtac tccagcctgg gcaacagagc aagagtccgt ctcaaaacaa
                                                                       1500
 acaaacaaaa aaaaaaaaa aaaactcgag ggggggyycc gtacccaatc gccctgatga
                                                                       1560
 tgtatggtat ac
                                                                       1572
 <210> 1560
 <211> 1265
 <212> DNA
 <213> Homo sapiens
 <400> 1560
 gcaacattat ctgcctttga aacaccacct ccgtggatta ccatttggcc caatgggagg
                                                                        60
 gtctggataa tgcccattat attatcctaa ttccctgcta cctcagaggt tgttaagggg
                                                                       120
 cacttctgct gtttccctct gagtgacctc tggctgccac tctcttgcag atgctccttt
                                                                       180
 tcctctcagg gatgagtcgg agctgggact gggaaaggca gccctcttgt ttctgttcaa
                                                                       240
 gttggccagg aatgcccagg aatgatgatt ctgttttgcc agcttcttgc cgtgagctgg
                                                                       300
 ggttgctgtg tttacagcac aaccaaccct aaagtcagtg caattcactg tggatttatt
                                                                       360
 gagcacctgc tagtatgtgc gtgtgttggg ggtggtatat gaaaatgatg gaggcagtct
                                                                       420
 ctgccttaaa tgagggaggg tgggcaaaca gctcccacgg tcggcggttg aaccagttcc
                                                                       480
 tattctttct cataggaagt gtccataaac attgtcttgt ctcatttgca tggttgttga
                                                                       540
 gaggtttgaa tgtagtggta atgaattgag agtgcttcta aaggtattaa gctcttgatt
                                                                       600
 tatgtaaaac tttcttcagt attactaggc aggctgataa taaaagctaa catatattga
                                                                       660
atgctttcta tttgccaggc actgccctaa gtgctttcta tatattagct tatttaatct
                                                                       720
 ttatagcaac tttgaagtag attgcttgtg tacccactta aaagaggatt aaaaaaactt
                                                                       780
gccgaggatg gcacagcagg taagtagcag agccaggcag tctgaacgtt tggccaaaca
                                                                       840
ctggccactg taaagatctt gtggaagtca gggagtagag gtggtctctc tcccccaagt
                                                                       900
gaaggcagca gccaggacct accgtcagag accagcaagg agcagagaaa ggtcaggctg
                                                                       960
gtgcctcaga aagcatcagc atttctgcac aacttaatta aattactgaa accttttctg
                                                                      1020
agcttggagc catctttctt ggagagtaat acaattgaaa cagataattt aagccaagga
                                                                      1080
ggaaggacag aattggtgag ctcacatatg tagatggaca tgtaatgacg tctgactaaa
                                                                      1140
acacagagga aaaaccttaa agtgaatcat gtttattcaa tttccaaaca agtgcaaaga
                                                                      1200
cccaggcagc gtgcttcatg tttggactct tgaagaacac acatggaaaa aaaaaaaaa
                                                                      1260
aaaaa
                                                                      1265
<210> 1561
<211> 3332
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (16)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (28)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (30)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (32)
<223> n equals a,t,g, or c
<220>
<221> SITE
```

```
<222> (44)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (625)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (3138)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (3315)
 <223> n equals a,t,g, or c
 <220>
 <221> SITE
 <222> (3332)
 <223> n equals a,t,g, or c
 <400> 1561
 actattcagt gcacangaca caagtcancn gncagtcacg gtcngattcc cgggtcgacc
                                                                        60
 cacgcgtccg gttattaacc tctctaaatt tcagggggaa aatgtataaa tatgtcatgt
                                                                       120
 atttgataaa tagttttccc tttttttaat gaaaagatta tctgattgga ttgacctgcc
                                                                       180
 tactaatttt tgctattaac tttttcattc ttaggcaata agcaacaaag accagcatag
                                                                       240
 catatcatat actttrtctc gggcccagac tgtggtggtt gaatatactc atgacagcaa
                                                                       300
cacmgatatg tttcagattg gccggtcgac tgaaagcccc attgattttg tagtaactga
                                                                       360
 cacggttcct ggaagtcaaa gtaattctga tacacagtca gtacaaagca ctatatcaag
                                                                       420
 atttgcctgc agaatcatat gtgaacggaa tcctcccttt acagcacgga tttatgctgc
                                                                       480
 aggatttgac tcatcaaaaa acatctttct tggggagaag gctgccaaat ggaagacatc
                                                                       540
agatggacag atggatggct tgaccactaa tggtgttctt gtgatgcatc cacgcaatgg
                                                                       600
gttcacagaa gactccaagc ctggnaatat ggagagaaat atcggtgtgt ggaaatgtat
                                                                       660
ttagcctacg tgaaaccaga tcggctcagc agagaggaaa aatggtggaa attgaaacca
                                                                       720
atcagttaca agatggctcg ttaattgacc tctgtggtgc aacattgtta tggcgtactg
                                                                       780
cagaaggcct ttcccacact cctaccgtga agcatttaga agctttaaga caggaaatca
                                                                       840
atgcagcacg acctcagtgc cctgtagggt tcaacacact agcatttcct agtatgaaga
                                                                       900
ggaaagacgt tgtagatgaa aaacaaccat gggtatatct aaactgcggc catgtacatg
                                                                       960
gctatcataa ctggggaaac aaagaagaac gtgatggaaa agatcgtgaa tgtcctatgt
                                                                      1020
gtaggtctgt tggtccctat gttcctctgt ggcttggatg tgaagctgga ttttatgtgg
                                                                      1080
acgccggccc tccaacccat gcgtttagcc cgtgtgggca tgtgtgttca gaaaagacaa
                                                                      1140
ctgcctattg gtcccagatc ccacttcctc atggtactca tacttttcat gcagcctgtc
                                                                      1200
ccttttgtgc acatcagttg gctggtgaac aaggctacat cagacttatt tttcaaggac
                                                                      1260
ctctagacta acagaccatt gtcttgcagg actacattat aaatttataa gctaagtgag
                                                                      1320
ttgggttttc gaacctgttg tccacgtcac agtttttctg ctctggtcat ttgcattaag
                                                                     1380
atgaagaatt ttttaaaaca tttataataa atagtagcaa tttctgagca aaaatctggg
                                                                     1440
aaactcaagc aaaggaattt ctgaaagtat cagtcttctg aattctgagt tttgaaaata
                                                                     1500
tattttgagg agaaaaagac atagtctaat ttgatgcctt ccttttagtg tttttgaatc
                                                                     1560
acctatcctc agtgctgaaa ttgttttgta taactgaggg tactgttggt tcaaactatg
                                                                     1620
ttagtttaca gtttgttgca aacattgtaa aatacagcga catgtatatt aactttttc
                                                                     1680
tatttatctt tattatagaa aataccttag aatgttcttg atagagtagc atggtaacga
                                                                     1740
tggtgtcaca cccttggtgt gaatggtagc ttagtgagca acctagctca aggatttgca
                                                                     1800
aagttaggaa gaaggacgag agagcetete teeceaceee aatetaaata tggaatttgg
                                                                     1860
taaattagaa tactttgtaa tttgtaagac caaattcata ctaattaccc gcgtgaaagg
                                                                     1920
tgtttgtttt taacaacatt gaagataatc aggaaagatt ttttcttaat gtttctctcg
                                                                     1980
agcgtagtac tataacaaaa acttaatgct aagaaacatt ttatatgctc ctttggatat
                                                                     2040
gcaatttaat ctagattatc tatttttctc ccatgataac taatctgttt ttagtatcag
                                                                     2100
cagcatttgg caagtttatt ttttggatat aaactgtggt tcatctgttc actgtttcta
                                                                     2160
gaaaaaaatc attgccataa gaaaaagtat aaattagcaa gaaaggagag tgacttgatt
                                                                     2220
```

| tgcttttgga | aaaagaaatg | cttaattaat | tattctgtat | ttggccttat | tcgggcatta | 2280 |
|--------------------------|--------------|--------------------------|----------------|------------|--------------------------|------------|
| ggaaatctag | agatctaaag | ggttgaatga | caatagtgcc | cccgttttta | gcagaccagc | 2340 |
| | | | | | aaatgtttgg | 2400 |
| | | | | | ctgtttattc | 2460 |
| | | | | | tcccctcctt | 2520 |
| | | | | | aatcttttt | 2580 |
| | | | | | aatattttga | 2640 |
| tttgttttcc | tttagtttga | aaagttgtat | aatacttaac | tgactgtagc | aaagttttat | 2700 |
| | | | | | tcttttggtt | 2760 |
| | | | | | ttcaactgtc | 2820 |
| gaaacttcct | tgttttaaaa | aatgatcatt | tgggttcact | caggaaatgc | atgtcaggaa | 2880 |
| | | | | | cctttttcaa | 2940 |
| agaaatgtaa | ttgattttga | agttttctag | attgtcacat | gctttgtgac | taatgcaaga | 3000 |
| aagcaagtcc | tgtgttgtat | ttgttctagt | catttttatt | caggctatat | attgtagctt | 3060 |
| aatttttatt | tgcaattaat | ttatttaaac | taagtaaata | cttttcaaaa | tacataattg | 3120 |
| aattcgtctc | tgtgagtnca | tttttgcata | atcgagaatg | agaaaccaga | agtgaaaact | 3180 |
| gtgaacaact | ctattccaca | ctccaaaaat | actcatttga | aatagatgaa | gagtttgcat | 3240 |
| ttaatgtaac | actttaaagt | atctggttct | tttttaaaag | catctcttac | taataaagga | 3300 |
| actttgttag | tggtngaata | aaaaaaaaa | an | | | 3332 |
| | | | | | | |
| <210> 1562 | | | | | | |
| <211> 1314 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| ~400× 1562 | | | | | | |
| <400> 1562 | ~~+ ~+ ~~ ~+ | | | | | |
| ggcacgagga | gattttgagt | cacagtgaag | caacccactg | gagtgagcat | tgctgcattt | 60 |
| | | gggccgcgat | | | | 120 |
| ttaacetees | agagtagaat | cacaggaatc | tgggggtgca | catatccagg | gtaaagtcag | 180 |
| | | caagaacaga | | | | 240 |
| cagctatta | accitatyaa | gcctatcttc | etgagaeett | ceggegacet | cagatagacc | 300 |
| tagacatcaa | tacctttaaa | cgagacaaat aaagaaaaag | atgagaagaa | gaaatacatg | gaccgaagtc | 360 |
| ttccagaaaa | aaaattagaa | cctgttgttt | ttgagaaggt | gaaaayayyy | agegaaceag | 420 |
| aagacccaca | actacctcaa | aaaagctccc | ccaaatccac | agggggtgtg | cayaaaaaaay | 480 540 |
| tagacettaa | tactcctata | gcctgctcca | ttacaaataa | taagaccagc | acggactige | 600 |
| agaaggattt | agatetatta | gcctctgttc | catccccttc | ttcttceaat | tccagaaag | 660 |
| | | gcagggagtg | | | | 720 |
| ttccggagcc | agggagcaaa | tcagaagaaa | taggcaagaa | acagetetet | aaagactcca | 780 |
| ttctttcact | gtatggatcc | cagacgcctc | aaatgcctac | tcaagcaatg | ttcatggctc | 840 |
| ccgctcagat | ggcatatccc | acagcctacc | ccagetteec | cogggttaca | cctcctaaca | 900 |
| | | cctccaccag | | | | 960 |
| ggatggttgc | ccccatggcc | atgcctgcag | gctatatggg | tggcatgcag | gcatcaatga | 1020 |
| tgggtgtgcc | gaatggaatg | atgaccaccc | agcaggctgg | ctacatggca | ggcatggcag | 1080 |
| ctatgcccca | gactgtgtat | ggggtccagc | cagctcagca | gctgcaatgg | aaccttactc | 1140 |
| agatgaccca | gcagatggct | gggatgaact | tctatggagc | caatggcatg | atgaactatg | 1200 |
| gacagtcaat | gagtggcgga | aatggacagg | cagcaaatca | gactctcagt | cctcagatgt | 1260 |
| ggaaataaaa | acaaaacacc | tgtaaaaaaa | aaaaaaaaa | aaaaaaaac | tcga | 1314 |
| | | | | | | |
| <210> 1563 | | | | | | |
| <211> 2545 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <100× 1563 | | | | | | |
| <400> 1563 | gatgttgagt | cacacters | 6336666 | anatan | | |
| ggcacgagga | atagaattt | aggagggaag | caacccactg | gagtgagtat | tgctgcattt | 60 |
| ggagagtcag | tactaaseta | cacaccastc | taggartag | gaacattggt | grantes | 120 |
| gcattcgatg ttaacctcga | ccantagact | caedaggaatC | ttcactcact | catatecagg | graaagtcag | 180 |
| aggcaaaccg | actttatcas | acctatatta | ctgagaggtt | taggagatg | gyaaatggaa | 240 |
| cagctgttga | aggatttatt | cdadacaaat | atgagaggge | daaatacata | rayatayacc raccraagte | 300 360 |
| | | - 3 - 3 | guguugua | gadacacacy | gaccyaagtc | 200 |
| | | | | | | |

```
tggacatcaa tgcctttagg aaagaaaaag atgacaagtg gaaaagaggg agcgaaccag
                                                                    420
ttccagaaaa aaaattggaa cctgttgttt ttgagaaggt gaaaatgcca cagaaaaaag
                                                                    480
aagacccaca gctacctcgg aaaagctccc cgaaatccac agcgcctgtc atggatttgt
                                                                    540
tgggccttga tgctcctgtg gcctgctcca ttgcaaatag taagaccagc aataccctag
                                                                    600
agaaggattt agatctgttg gcctctgttc catccccttc ttcttcsggt tccagaaagg
                                                                    660
ttgtaggttc catgccaact gcagggagtg ccggctctgt tcctgaaaat ctgaacctgt
                                                                    720
ttccggagcc agggagcaaa tcagaagaaa taggcaagaa acagctctct aaagactcca
                                                                    780
ttctttcact gtatggatcc cagacgcctc aaatgcctac tcaagcaatg ttcatggctc
                                                                    840
ccgctcagat ggcatatccc acagcctacc ccagcttccc cggggttaca cctcctaaca
                                                                    900
gcataatggg gagcatgatg cctccaccag taggcatggt tgctcagcca ggagcttctg
                                                                    960
ggatggttgc ccccatggcc atgcctgcag gctatatggg tggcatgcag gcatcaatga
                                                                   1020
tgggtgtgcc gaatggaatg atgaccaccc agcaggctgg ctacatggca ggcatggcag
                                                                   1080
ctatgcccca gactgtgtat ggggtccagc cagctcagca gctgcaatgg aaccttactc
                                                                   1140
agatgaccca gcagatggct gggatgaact tctatggagc caatggcatg atgaactatg
                                                                   1200
gacagtcaat gagtggcgga aatggacagg cagcaaatca gactctcagt cctcagatgt
                                                                   1260
ggaaataaaa acaaaacacc tgtatggctg ccattctctt cagccctcgc tctccccttt
                                                                   1320
ccacagcete cacceetgae ecceatecte ttttectace tetetgtttg gtttagaaat
                                                                   1380
tgctcaataa gtcatttggg gtttggcatc ctgcccagcc acttcccaaa catgaagacc
                                                                   1440
tetetgttge tttatgttgt acatgeecca tagecatece aacgteetee ceagteetet
                                                                   1500
cctggcacca gcaccttaga agttgttggc agaaggcact taaactgtgg gagaagtgtg
                                                                   1560
cacacctttg agtcccttcc ctcaaggtta aagctcctgt cagactctca gaagggtctg
                                                                   1620
tgggtgttgt atattaggca aacaggggaa agcttagagg tccttctata tgtgttaata
                                                                   1680
agctgtttct aagtgtttaa atttgaaaag catcatgttc tcatgattta tgggaatgaa
                                                                   1740
gcaagtactg aaatcaaatt aaatactccc tgggtcctgg gtcagtttga ccctagccct
                                                                   1800
ggggtgaggc aagccccctc ctatgaggat gagcaaaaat actactctct tcgccctgag
                                                                   1860
ttgctttctg gatctggggc ttcaggactt gctgcttcag tcagccttta ttagcaccaa
                                                                   1920
agactttatg aagateeeac acacagaeac acateeette eegeeteeee eetgeettea
                                                                   1980
gtaggatctg gctccgtggc tggaggacca acccctatag tgggaatgca gagcttaacg
                                                                   2040
2100
accetetece catetgetet gggtattttt gtttttgttt agttttaggt ttacaacaga
                                                                   2160
gaggaattaa tttatcagca gcctaaaact gttgtgtttt tcttatggtt taaaaaacgc
                                                                   2220
catgicatty ataacteest tieteestic cettetees gietgetgat caetetitea
                                                                   2280
tgcctgtgta tccagggtgc tctgtttccc caccgttccc aggtgtacga ggcagagggc
                                                                   2340
egggacaget tteeteteag teattgttea eeceaettga aaatteagae aagaaaaett
                                                                  2400
tgcttaaaag atttcatgtg tgggaaccac agttcctggc tgcctttctc ctgtgtatgt
                                                                  2460
2520
aaaaaaaaa ctcga
                                                                  2545
<210> 1564
<211> 1564
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (50)
<223> n equals a,t,g, or c
<400> 1564
aaactgcagt ttaaaagtgt ttatatcctg gatacactaa cagcattttn tccaacttgt
                                                                    60
ggagtggagg gagtagggaa ggggaggata gtgctaatga actgtgacag gggctagcaa
                                                                   120
gaaagaaaga aaaagagttc cctaagtaag ctcctactgg gtgtcctcca ctcacatgga
                                                                   180
gacagggccc tgcttttagg cacttactct tccagtgtct attgyataat atgttcagga
                                                                   240
aggatcccag attcaaagat ttatagaatt agrgttaaaa gggatagata tcttgtttga
                                                                   300
ccctgaaaaa attaaggaat atgcttgaga tattcaatgg cagaggctgg aatagatttt
                                                                   360
cccaaatctc ctgatgtgaa gttctgtgtt tgtcaaacat gactgtgtaa aaagattaat
                                                                   420
ttaaacttaa tgacatgttg tattcataga agttctttgg gtttctgtgg aaacctcctc
                                                                   480
ttgctagctt aagcagaaat gggggattta ttggaaggaa gctgagatat tgcaccaaac
                                                                   540
tgcacaaaat tgaatgaaga gctgactaag caaggctgca ctgagaagga accagggtgg
                                                                   600
tctgggctgt ggtagcggca gcagcagctt gcagatctcc cagcgctgat gctggctcga
                                                                   660
ctcagacagg tctccactct ctgctgtctg tctctggctc agacaggaca ctttgtgtgg
                                                                   720
```

```
ctgtttcctt ccacaaggcc tcagtgggag caagccagcc tcccacaggc ctctgagaca
                                                                       780
 gaccacccca ttcctccctc tcctgttaac ctgcctttat ttccttaatt gcacttatca
                                                                       840
 ccatgcagaa gcctatgtgt ttgttcccct gtggagatgt aaaaacactg atgcccaggc
                                                                       900
 ctaactccca gagactctga ttgaactggt ctgggctatg gagccgggac atttgcattt
                                                                       960
 ttcttacaag ctctaatgtg cagccaggat taagaatcat tgccttctgc atcaacagga
                                                                      1020
 caaatacaaa atgtgcagca aaatatatgt ttaagtgaat caagaagaca gatctagaaa
                                                                      1080
 cgattgttaa ggaataataa tgcattttgt ccatcaccac acataagtga tgttgaccag
                                                                      1140
 agccctccca gattgagtgg tgccaggtgt tcggggttgt ctcggttaat ccttactatg
                                                                      1200
 gccttgcggg gtagggggca gtgtcctcat tgtccaaatg agtcactgag gctgagggat
                                                                      1260
 tcaggctcag tgtatgccca cagttctttg gcaaacccca ccactgggcc agccaactac
                                                                      1320
 acggggattc tgatcgggtc ctgatgggtg cccatgatgg gctgtgcaaa agtggtggtg
                                                                      1380
 agatttctcc accttcacgg aggtggtacc caggggaggt ggacttcagc agcgagaatg
                                                                      1440
 ggctgggtgc agtggctcac agctgtaatc ccagtgcttt gggagttcga ggcaggagaa
                                                                      1500
 ttgcatgagc tcagttgttc gagaccatgg gagaccctgt ctctacaaaa aaaaaaaaa
                                                                      1560
 aaaa
                                                                      1564
 <210> 1565
 <211> 914
 <212> DNA
 <213> Homo sapiens
 <400> 1565
 ggcacgagaa gctatccatg aaaacacttt gtgatgtgct gttttatatc acagaatgga
                                                                        60
acctgtgttt tgattcaaca agttcaaaac actcttttca taaaatctaa gaagttatgt
                                                                       120
ttctgaacct attgagcctt tataggaaca tatgaatatc cagtcctaaa aactagaaat
                                                                       180
gagcgatctg tgaaaacact ttgtgatgtg ctgtttcata tcacagaatg ggacctgtgt
                                                                       240
tttgaagaaa ccaaccctac tgacaccttg atcttggact tctagtctca gaactatctt
                                                                       300
gggacatttc ctataaatag atgcatgcaa tacgtggctt tggaagatgg attttaacca
                                                                       360
actctactga cgagtctgct ttaggactct tggtccagac tgacttcatg gagagtgttg
                                                                       420
ggggttgtgg gagaggccaa gcctacaagc tgtgggaagc tggtggatgg aaggctggtt
                                                                       480
agaattette aggatetggg gaaceteaga gagtgetgaa acetgttggg acgttggatg
                                                                       540
agccaatact tggcaaacgc aagaatacaa aggtttcttt ctttctttt ctttttccag
                                                                       600
atactcaaaa gctggggcca tgttacatgt gcccagctgt ttcattagtt aatatctttt
                                                                       660
ggttgcaggc catggcaacc aaatctaaag taacttaaac aagaaaagga atgttttggc
                                                                      720
tcatgaaata aaaaagttta gggatggcca ggcatggtgg ctcccacctg taatctcagc
                                                                      780
actttaggag gctgagacag gagaattgct tgaacctggg aggtggaggt tgcagtgagc
                                                                      840
taagatggca ccattgcact ccagcctggc ggacaaagtg agactccatc ccctcaaaa
                                                                      900
aaaaaaaaa aaaa
                                                                      914
<210> 1566
<211> 2235
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1097)
<223> n equals a,t,g, or c
<400> 1566
cacgagggaa ttacaggcgt gaactaccgt gcccagcctt tttttcatag cagttttatt
                                                                       60
aagttgtatt tgccatacca cccaatgtat ccatttaagc acctgattca gtggtttttc
                                                                      120
atgtactcat ggagttatgc agccacaatc ttagcgcatt ttcattaccc caaaaagaaa
                                                                      180
ctgtacccat tatgcacccc gttcccctcc tccggtcctg gcaaccacga gtctactgtc
                                                                      240
tgtcttcatg gatttgccta ttctcgacgt ttcattggga tgaaatcaca cagtgtatgg
                                                                      300
cttcccacac tttactgtgc tgttgtcaag gtttatctat gtgttgggtg cagccacccc
                                                                      360
ttggtatcca cagggattgg acccaggagc ctgcaccgat cccctgcagg gatgcctgtg
                                                                      420
tcccacagtg ccccctgcaa aactcactga tatgaagagt cggccctctg tatccatggg
                                                                      480
cttcagatcc cgtgattact gtatcttctg tctgtgtgca gttgaatctg cgggtgtaga
                                                                      540
acccacagac acagggagtg gctgtagctt atccctttgt atggtcagag agtgttccgt
                                                                      600
agcggggatg gacacgtgtt cattcactct tccactgatg ggcatcggga atgtttccac
                                                                      660
```

```
tttctgtcta tcattaacaa ttctgctaca aacatacatg tacttctgtt ggaggggaca
                                                                    720
 catgttttca tttctcttgg gtgtgtctat ccaggagtgg aattggctgg gtcttatggt
                                                                    780
 aactctgtta actgtttttt gctttttggt tttttgtttg tttgtttttt gagacggagt
                                                                    840
 ttcacccttg ctgtgaacta ccataggctg gagtacaatg gcgcaatccc agctcagcac
                                                                    900
 aacctctgcc tcgtagattc aagccagcag ggcgagcctc taccccagag tgaaggtgga
                                                                    960
 ctttgccctc tcgtgccacg agkacttgct ggcacccatc tctgagccca tcgagtggaa
                                                                   1020
 ataccacage ccatgaggag tggaaatgag gaagtgetgg etgatgteeg caccategtg
                                                                   1080
 aaccagatca gctacanccc ccaggatccc cgagacctct gtggacgcat actgaccacc
                                                                   1140
 tgctacatgg ccagcaagaa ctcctcccag gagacgtgca cccgggccag agagttggcc
                                                                   1200
 cagcagattg gaagccacca catcagtctc aacatcgatc cagccgtgaa ggccgtcatg
                                                                   1260
 ggcatcttca gcctggtgac ggggaagagc cctctgtttg cagctcatgg aggaagcagc
                                                                   1320
 agggaaaacc tggcgctgca aaatgtgcag gctcgaatac ggatggtcct cgcctatctg
                                                                   1380
 tttgctcagt tgagcctctg gtctcggggt gtccacggtg ggctcctcgt gctgggatcc
                                                                   1440
gccaacgtgg atgagagtct cctgggctac ctgaccaagt acgactgctc cagtgcggac
                                                                   1500
atcaacccca taggcgggat cagcaagacg gacctcaggg ccttcgtcca gttctgcatc
                                                                   1560
cagcgcttcc agcttcctgc cctgcagagc atcctgttgg cgccggccac cgcagagctg
                                                                   1620
gagcccttgg ctgatggaca ggtgtcccag accgacgagg aagatatggg gatgacatat
                                                                   1680
geggagetet eggtetatgg gaaacteagg aaggtggeea agatggggee etacageatg
                                                                   1740
ttctgcaaac tcctcggcat gtggagacac atctgcaccc cgagacaggt cgctgacaaa
                                                                   1800
gtgaagcggt ttttctccaa gtactccatg aacagacaca agatgaccac gctcacaccc
                                                                   1860
gcgtaccacg ccgagaacta cagccctgag gacaacaggt ttgatctgcg accatttctg
                                                                   1920
tacaacacaa gctggccttg gcagtttcgg tgcatagaaa atcaggtgct acagctcgag
                                                                   1980
agggcagagc cacagtccct ggacggcgtg gactgaggcc ggttccttcc tggaggcctc
                                                                   2040
ctgtcctcgg ggaccccagc acctcatcat cagcattgct ggagccaagg gtaggagccc
                                                                   2100
tacactagga gcccaggatg ggacggcgca tcagccgaga gggagggaac ttttcagtca
                                                                   2160
aattcctcaa aaagaggctg gaataaagcc tgggcttaaa aagaaaaaaa aaaaaaaaa
                                                                   2220
aaaaaaaact cgtag
                                                                   2235
<210> 1567
<211> 1369
<212> DNA
<213> Homo sapiens
<400> 1567
aagatctagt tagagaaagg ttttgaacag tgggaaacta agtgggcagg gatgtgactt
                                                                     60
ctgtagccac ccgaatgttt gtgtctctga ctgtttgagc ttagctctcc ttgctggttt
                                                                    120
catttgctct tatggcagac agtgtgctct ggtggcgctg gaagatgtta aggcgtatct
                                                                    180
cactgaggag aatggtcaga ttgcggtaag ctttatctgc tgcttcttct ttctggtccc
                                                                    240
caccettgca geageetgge tacceageee cacettgagt etgeeetggt ggggttetgt
                                                                    300
ttctctgttc ctgctcattt accttgtgta ctttcttcac aggtgtttga tgccaccaat
                                                                    360
acaacccggg agaggaggga catgattttg aactttgctg aacagaattc cttcaaggta
                                                                    420
ggatctgact ccatgttgga ggaaaaggga tgagtagagg tggggagtca ggctacaggc
                                                                    480
atggatetet caetetagtg ggtgaggaca ggatgggata tetgaatete tteteteaga
                                                                   540
gcattccccc agtccttgag tgttttcatt caggtccttt ctcagactgt tagcctgtat
                                                                   600
gtttgaggcc caggggctgt ggtaagagct atgaggagga cttgagggcc actttcatga
                                                                   660
agaaaatcct gggagatgtg gtggctgggt ggggtagatg agcatgtgct cttaattaac
                                                                   720
agectggcat ttttgacttg cttatcactg ccttctctcc atggccaggt attctttgtg
                                                                   780
gaatccgtct gtgatgatcc tgatgtcatt gctgccaata ttctggttgg tgacacccct
                                                                   840
900
gtgtgtgtgt gttgttgggg aggggtgttt tcgtaatgaa agagagaaat agacatgttt
                                                                   960
aacatcacaa agagatettt tetatetgee agageeeeat etggtaette tacaetette
                                                                  1020
tcttgggaga ggaaactgag gctttaagga atcaagtaag aattagctgt tgaattgaaa
                                                                  1080
ccagggttta ggttgtagga ttcttggccc tgtgctctag gtattatctg gatgttgaga
                                                                  1140
cctagatgtt ggaatagatc agccgggcac ggtggctcat gcttgtaggc tcagcacttt
                                                                  1200
gggaggccga ggcaagtgga ttgcttgaac ccagaaggat caccttagcc tgggaggttg
                                                                  1260
1320
tgtccagtct tggtaacaga gtgagaacat gtctcaaaaa aaaaaaaaa
                                                                  1369
<210> 1568
<211> 2910
```

```
<400> 1568
aattcggcac aggggcagtc tggsatgatc tttttggagg taagttgtgc ctcactgaaa
                                                                      60
actaatcccc agcccatctt tgcctgcttt ctagccctgt ctatcctgaa gcgggctcgc
                                                                     120
cgggaagcgc ccaggccgtg tagcctttga tgggatcacc gtcttctact tcccccgctg
                                                                     180
ccagggcttc accagtgtgc ccagccgtgg tggctgtact ctgggtatgg cccttcgcca
                                                                     240
cagtgcttgc cgtcgcttct ctttggctga gtttgcgcag kagcaagccc gtgcacggca
                                                                     300
cgagaagctc cgccagcgct tgaaagagga gaagttggag atgctgcagt ggaagctttc
                                                                     360
ggcagctggg gtaccccagg cagaggcagg gctgccacct gtggtggatg ccattkatga
                                                                     420
cgcctctgtg gaggargact tggsagtcgc tktggcaggt ggccggttgg aagaagtgag
                                                                     480
cttcctacag ccctwsccag cccggcgmcg tcgagctctg ctgagggctt caggtgtgcg
                                                                     540
aaggatcgat cgggaggaga wgcgggagct gcaggcactg cgccaatccc gggaggattg
                                                                     600
tggctgtcac tgcgatagga tctgcgaccc tgagacctgc agctgcakcc tggcaggcat
                                                                     660
caagtgccag atggaccaca cagcattccc ctgtggctgc tgcagggagg gctgtgagaa
                                                                     720
ccccatgggc cgtgtggaat ttaatcaggc aagagttcag acccatttma tccacacact
                                                                     780
caccegeetg cagttggaac aggaggetga gagetttagg gagetggagg ceeetgeeca
                                                                     840
gggcagccca cccagccctg gtgaggaggc cctggtccct actttcccac tggccaagcc
                                                                     900
ccccatgaac aatgagctgg gagacaacag ctgcagcagc gacatgactg attcttcyac
                                                                     960
agcatettea teagcategg geactagtga ggeteetgae tgeeceacce acceaggeet
                                                                    1020
gcctggccct ggcttccagc ctggcgttga tgatgacagc ctggcacgca tcttgagttt
                                                                    1080
cagtgactct gacttcggtg gggaggagga ggaagaggag gaagggagcg tggggaacct
                                                                    1140
ggacaacctc agctgcttcc atccagctga catctttggt actagtgacc ctggtggcct
                                                                    1200
ggccagctgg acccacagct attctggctg tagcttcaca tcaggcrtcc tggatgagaa
                                                                    1260
tgccaacctg gatgccagct gcttcctaaa tggtggcctt gaagggtcaa gggaaggcag
                                                                    1320
cetteetgge aceteagtge cacceageat ggacgetgge eggagtaget cagtggatet
                                                                    1380
cagcttgtct tcttgtgact cctttgagtt actccaggct ctgccagatt atagtctggg
                                                                    1440
gcctcactac acatcacaga aggtgtctga cagcctggac aacatcgagg cacctcactt
                                                                    1500
ccccctgcct ggcctgtctc cacctgggga tgccagcagt tgcttcctgg agtccctcat
                                                                   1560
gggcttctcc gagccagccg ccgaagccct agatcccttt attgacagcc agtttgagga
                                                                   1620
cactgtccca gcatctctaa tggagcctgt gccggtgtga ggaccaggat gtctttccc
                                                                   1680
agccccaaga gacctgttgc tgctttcttg taattatggg gctccccaga gtctgcgtaa
                                                                   1740
cagtetecca etggetgget cacceacagg tgccatgtge acacteetgg ttttcaaaca
                                                                   1800
attctctgga tttatttatt tgttttaact tttctgtgct gaagagagga ctagggggag
                                                                   1860
ggggcttccc ctttcagctg cccggccccc cacacccaca gcttgctctt ctatctccac
                                                                   1920
aacgtgagcc tggaagagga gaaaatgtgg ctcctctgga gcttggcaga ccacttttcg
                                                                   1980
gtctttgcgt gatgttcctt agcccaaaga cggtgagaca gggctgaaat caggtggctt
                                                                   2040
ctgccaccct gagccctaga cccatgggtg gctaaatcca ctggactgtg aagactataa
                                                                   2100
tttatttcca taatttattt ggagattgag gaggctttgg ttgcacttct ttggctggtg
                                                                   2160
ggtaatgcca ggggtggggt gggcacaggc cctcaagagc cccttttgcc ttgtagtcct
                                                                   2220
acaccttgcc ctgcctgggc tttggtgcag actaggtgtg gatttgagct ctgtgatcta
                                                                   2280
tgtctgctgc ctggctccta gatggctctg ygggcaggtg ctggccaagg acatcatcta
                                                                   2340
ggcaggggga gagcctgggc tgaacagctg tgaccaaaac tcccttctgc cccaccctgc
                                                                   2400
cccctccact tcctgccctc tgttccatct tcccccttcc caaaggccac agcctttatt
                                                                   2460
ccaggcccag ggatgtagga ggggaagga ggaaacagga agcccagaga gggcaaaggg
                                                                   2520
cctacctcgg ggcgcgaacc atgccccaga ctattatctc agggctttct gggcactgca
                                                                   2580
cttcagcgtg gcccacctgc ccatgccctg aggccagttg gcgaggggtg gctcctgagg
                                                                   2640
gtttttatac cctttgtttg ctaatgttta attttgcatc ataatttcta cattgtccct
                                                                   2700
gagtgtcaga actataattt attccatttc tctctgtgtc tgtgccaaga aacgcaggct
                                                                   2760
ctgggcctgc cccttgccca ggaggccttg ccagcctgtg tgcttgtggg aacaccttgt
                                                                   2820
2880
aaaaaaaaa gggcggccgc
                                                                   2910
```

<210> 1569

<211> 2430

<212> DNA

<213> Homo sapiens

<220>

<221> SITE

<222> (5)

<220>

```
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (8)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (11)
<223> n equals a,t,g, or c
<400> 1569
ccagntingg ngcttcccag cccggcgmcg tcgagctctg ctgagggctt caggtgtgcg
                                                                     60
aaggatcgat cgggaggaga wgcgggagct gcaggcactg cgccaatccc gggaggattg
                                                                    120
tggctgtcac tgcgatagga tctgcgaccc tgagacctgc agctgcakcc tggcaggcat
                                                                    180
caagtgccag atggaccaca cagcattccc ctgtggctgc tgcagggagg gctgtgagaa
                                                                    240
ccccatgggc cgtgtggaat ttaatcaggc aagagttcag acccatttma tccacacact
                                                                    300
caccegectg cagttggaac aggaggetga gagetttagg gagetggagg eccetgeeca
                                                                    360
gggcagccca cccagccctg gtgaggaggc cctggtccct actttcccac tggccaagcc
                                                                    420
ccccatgaac aatgagctgg gagacaacag ctgcagcagc gacatgactg attcttcyac
                                                                    480
agcatcttca tcagcatcgg gcactagtga ggctcctgac tgccccaccc acccaggcct
                                                                    540
gcctggccct ggcttccagc ctggcgttga tgatgacagc ctggcacgca tcttgagttt
                                                                    600
cagtgactct gacttcggtg gggaggagga ggaagaggag gaagggagcg tggggaacct
                                                                    660
ggacaacctc agctgcttcc atccagctga catctttggt actagtgacc ctggtggcct
                                                                    720
ggccagctgg acccacagct attctggctg tagcttcaca tcaggcrtcc tggatgagaa
                                                                    780
tgccaacctg gatgccagct gcttcctaaa tggtggcctt gaagggtcaa gggaaggcag
                                                                    840
cetteetgge aceteagtge caceeageat ggacgetgge eggagtaget cagtggatet
                                                                    900
cagcttgtct tcttgtgact cctttgagtt actccaggct ctgccagatt atagtctggg
                                                                    960
gcctcactac acatcacaga aggtgtctga cagcctggac aacatcgagg cacctcactt
                                                                   1020
ccccctgcct ggcctgtctc cacctgggga tgccagcagt tgcttcctgg agtccctcat
                                                                   1080
gggcttctcc gagccagccg ccgaagccct agatcccttt attgacagcc agtttgagga
                                                                   1140
cactgtccca gcatctctaa tggagcctgt gccggtgtga ggaccaggat gtcttttccc
                                                                   1200
agccccaaga gacctgttgc tgctttcttg taattatggg gctccccaga gtctgcgtaa
                                                                   1260
cagtetecca etggetgget cacceacagg tgccatgtge acaetectgg ttttcaaaca
                                                                   1320
attctctgga tttatttatt tgttttaact tttctgtgct gaagagagga ctaggggggg
                                                                   1380
ggggcttccc ctttcagctg cccggccccc cacacccaca gcttgctctt ctatctccac
                                                                   1440
aacgtgagcc tggaagagga gaaaatgtgg ctcctctgga gcttggcaga ccacttttcg
                                                                   1500
gtctttgcgt gatgttcctt agcccaaaga cggtgagaca gggctgaaat caggtggctt
                                                                   1560
ctgccaccct gagccctaga cccatgggtg gctaaatcca ctggactgtg aagactataa
                                                                   1620
tttatttcca taatttattt ggagattgag gaggctttgg ttgcacttct ttggctggtg
                                                                   1680
ggtaatgcca ggggtggggt gggcacaggc cctcaagagc cccttttgcc ttgtagtcct
                                                                   1740
acaccttgcc ctgcctgggc tttggtgcag actaggtgtg gatttgagct ctgtgatcta
                                                                   1800
tgtctgctgc ctggctccta gatggctctg ygggcaggtg ctggccaagg acatcatcta
                                                                   1860
ggcaggggga gagcctgggc tgaacagctg tgaccaaaac tcccttctgc cccaccctgc
                                                                   1920
cccctccact tcctgccctc tgttccatct tcccccttcc caaaggccac agcctttatt
                                                                   1980
ccaggcccag ggatgtagga ggggaagga ggaaacagga agcccagaga gggcaaaggg
                                                                   2040
cctacctcgg ggcgcgaacc atgccccaga ctattatctc agggctttct gggcactgca
                                                                   2100
cttcagcgtg gcccacctgc ccatgccctg aggccagttg gcgaggggtg gctcctgagg
                                                                   2160
gtttttatac cetttgtttg etaatgttta attttgeate ataattteta cattgteect
                                                                   2220
gagtgtcaga actataattt attccatttc tctctgtgtc tgtgccaaga aacgcaggct
                                                                   2280
ctgggcctgc cccttgccca ggaggccttg ccagcctgtg tgcttgtggg aacaccttgt
                                                                   2340
2400
aaaaaaaaa gggcggccgc
                                                                   2430
<210> 1570
<211> 1525
<212> DNA
```

913

```
<221> SITE
<222> (1499)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1502)
<223> n equals a,t,g, or c
<400> 1570
gaatteggae gageagttga aaaaceetta gteaetttga cacatetget etttacaetg
                                                                        60
gtattttctt ggtttaagtg acgacatact gaaatgactg ggtcaaatca acaaatcaga
                                                                       120
tattgcaaaa ccagtatttt tccaaaaatt gactgtatat ataaagtcag ccagtgctgc
                                                                       180
ttcgtatttt tagatagtaa gtgcagaaat ataacttcct cttctttctg tctctagttt
                                                                       240
ttactgttga cctatcccta tgctcctcaa ctggacgcta gtctcttgta ggaaataaat
                                                                       300
ctctttaaga aagatgaaag aagttgcaaa ctttgaaaca aaaatgggtg gagtacarat
                                                                       360
ctctgcagtt acaggaacat cgtctgcttc atggtgatgc agctaattgc cccagtttqq
                                                                       420
aaaacatgga cttggatgaa ttgtctttgt ttggacccct gcctgggcca gqcccaqccc
                                                                       480
ttgtggaccg gaatcgatta tccagtgaga gcagctgtaa gagctggctg agctccatga
                                                                       540
cgatggacag tgaagatggc taccagacgt gtgtgtctga ggactccagc aggggtgcct
                                                                       600
tcagtcggca gacgagtaca gatgatgagt gctttatccc caaggagggg gatgattttc
                                                                       660
tgaggaggtc atcttcaagg aggaaccgga gcatcagtaa caccagcagc ggatccatgt
                                                                       720
ctcccttgtg ggagggcaac ttatcaagca tgtttgggac cctgccccgg aagagcagaa
                                                                       780
agggaagtgt ccgaaagcaa ctcttgaaat ttatccctgg ccttcatcgt gctgtggaag
                                                                       840
aggaagaaag tcgcttttga cggattgtgg tgtcctttca aattagctta tttcacaaat
                                                                       900
atctctagac tcacccagat cccagcttgg tgggaaagtg cagaagaatt gcaaaactga
                                                                       960
catcccattt cacagcaata gtgaccttta tttaaattgt tgtgttatag tttatgcttc
                                                                      1020
ttaaatcatt tttcaaccta aacagccaat ttctaagcag acaggaaaac taaataataa
                                                                      1080
gttaattaat ataacaaaga tgcaggttcc tgctcattcc agtaatgtct ttgaaagcaa
                                                                      1140
aactaatatt tattttctag attatccctg tgaataattg agaacttttt ggagtcaagt
                                                                     1200
atgaataaag gtgtggcaga atataataat ctggactatt ttctatagga taattgctgg
                                                                     1260
gttataaaat cttaggtttg cttatgccca gtagctcctg cggaggctta ataataggca
                                                                     1320
attttgaatt tgttcaaacc tgtaatggct tgtaaacaaa gatgaccatc agctgtttct
                                                                     1380
cacatctata gtgacaataa agcgggaagt ataagattta ataggagggg ttaaggttca
                                                                     1440
tgagaaccat ggaaagatgt ggtytgagat ggggtgckgc aaagatcatt aataaagtnc
                                                                     1500
antattatag acagtctaaa aaaaa
                                                                     1525
<210> 1571
<211> 2399
<212> DNA
<213> Homo sapiens
<400> 1571
ccctgctgag aatggatttg tttgtgttct ataccttggt gtcatgaagt ccgataatta
                                                                       60
atgtaaaatt ctcaatttcc cgcctagccc aaaataagta ctcagcaatg ttggttgact
                                                                      120
gtgtcctatt taataatatt tttatggcac catgctccat taaactcaga acaatttgta
                                                                      180
gaagtettet aatttatett egaetataga ttecagaaet etttgaetta eatttgaeta
                                                                      240
agtaaaaaga tgtctttctg cctctagaag acagtttttc ctagaaacat tgattctgat
                                                                      300
gcctaatttt ctttacccat taattcatgg acttattttt attgtttttc acacatcctc
                                                                      360
acaatctttg ccaggaacat ggtgagcagg aatacttacc tttcagggca gggagaaagg
                                                                      420
tcagagcctc aggtggcctc tgagtgacct cagtgctaga gctgtccacc tgtttatact
                                                                      480
cctggctatc acacctttat cccatcacag aagcttacaa aaggagtaat tattagagtt
                                                                      540
tgctttgtaa agcctaattt tggatttcca tttaataatt aaagctggtt ttagggaagc
                                                                      600
ccctaaacca acctgagttt tcttgaaata ctaacttgtg tcttgctgtt atctgagtca
                                                                      660
cacttttatc ctaattttta gatacggacg gcctgaccct ctgctccgga gagaacacga
                                                                      720
cattcgcgtg agcctccgga tggcctctgt gcagtatgtg catactcagc gtttccaggc
                                                                      780
agaggtggtg gccttcattc agcatttcac tcagctgcag gatgtcttag ggcgccagcg
                                                                      840
agctgctatt gaggggcaga cggtaggtag cctgggccct ccaagctgct tttccagttt
                                                                      900
gactgatcag tagaactttt aggcctctag agatgaatct ggaagagtaa aggtaagtta
                                                                      960
tccttgctaa tatgttctcc gtgtagatta gctacagaca tctttgtgta attgaagagc
                                                                     1020
tttgttcctt atttattgta tctcacttaa attaccttca aactttagct ttcactttct
                                                                     1080
```

<211> 2847

```
gtaaaaaaag ataagggagg tttacaaaga acacttaaga cttctggtcc cttttaggac
                                                                      1140
ttcagtgggg atgtttctct tggaaagtgg taggtttttt ctaaatgcag tagatcagaa
                                                                      1200
gttctaaact gagttcgtgg cccccgtggg gtcctggtag tttattcatg gcacatccta
                                                                      1260
ggccaaagga aacacctaat ggtatttccg tttacaaagt aagtcagtct aaacaacaag
                                                                      1320
tacatatgtc ctaacaactt agtaggtgtt tgaaaaaata ataacacata aatggaaaga
                                                                     1380
ataatatttt atttaattct taagtaacca caatgactgg taggaggtat gtgcctgtta
                                                                     1440
ggtattgcat aacttctcaa acttggaatc aggttggaca ttacaaccct cacttcctgt
                                                                     1500
ccacatttat cttcttatgg tacttgcttt ttctcacagc aaccgctgaa gacccagctt
                                                                     1560
cgcaaagata ataccttact gaaaggagta tagaatgatc tattattgaa tgccaactac
                                                                     1620
cacaagctac tagttagtgc agtgtctggc agatgttgtt tttccttcaa aaatttaaaa
                                                                     1680
tgtcctggca gccgggtgtg gtggctcacg cctgtaaatc ctagcacttt gggaggccga
                                                                     1740
ggcgggcaga tcacgaggtc cagagatcga gaccatcctg gccaacatga cgaaaccccg
                                                                     1800
tctttactaa aatacaaaaa ttagctgggc atggtggcac gtgcctgtag tcccagctat
                                                                     1860
tcgggaggct aaggcaggag aatcgcttga acctgggagg cggaggttgg agtgagccga
                                                                     1920
ggtggcgcca ctgcactcca gtctggcgac agagcgagac tccgtctcaa aaaaaaagt
                                                                     1980
cctgacagct gcaagccttt gccaccctgt ggtgtctcag tgcagtttgg gaaccataga
                                                                     2040
aaataacaat gtacttttgt aacaacgtgt tatttttcct ttttttaaaa aaactttatg
                                                                     2100
gccaggcgtg gtggctcaca cctgtaatcc cagcactttg gggggcgagg cgggcaaatc
                                                                     2160
acttgagete aggaattegt gaccageetg ggeaacatgg tggaattetg tetetacaag
                                                                     2220
aaatacagaa attagccggg tgtggtgagg catgtgtctg tagtcccagg tacttgggag
                                                                     2280
gctgaggtgg gaggatggct tgagcccagg aggtggaggt tgcagtgagc tgagatcatg
                                                                     2340
ccacctgcac ttcagccttg gtgacagagc caccatgact caaaaaaaaa aaaaaaaaa
                                                                     2399
<210> 1572
<211> 1709
<212> DNA
<213> Homo sapiens
<400> 1572
agcttatacc agctgaatgg cagccttgcc taatccacct acaacaagaa tttcttaagc
                                                                       60
tttcttttat ttgcatgaga gagccactac caaggcatgt tttgttatgc tgaaactggg
                                                                      120
ctgctgcata ctgctaaatg gcacctctgg gattggccta cctggggatt tcttggtttg
                                                                      180
tgaaaacagg agaggagaaa tatctsatac aagtgaaagg atactggaga gagaaattac
                                                                      240
ccatttctaa aaaaaaacca cactctgtcg tatctgtgtt aatgttttct agcatgtact
                                                                      300
ctggtttcaa cagacacaaa tttatatgtt aacccagttt tcttgccgtt ctgtaagtgt
                                                                      360
tttattctta gtgtgatttt tttccattgg gatgtttttg attgaacttg ttcattttgt
                                                                      420
tttgcttggg aggaaaataa acaattttac ttttttcctt taggagcatt atgagcatta
                                                                      480
tgtcagaata gaatagaatt ggggttcgat cttaacaggc cagaaatgcc tgggttttwt
                                                                      540
tggtttgttt ttgtttttgt ttttttatca aatcctgcct gactgtctgc ttgttttgcc
                                                                      600
taccatcgtg acatctccat ggctgtacca ccttgtcggg tagcttatca gactgatgtt
                                                                      660
gactgtyraa teteatggea acaceagteg atgggetgte tgacattttg gtatetttea
                                                                      720
tctgaccatc catatccaat gttctcattt aaacattacc cagcatcatt gtttataatc
                                                                      780
agaaactetg gteettetgt etggtggeae ttagagtett ttgtgeeata atgeageagt
                                                                      840
atggagggag gattttatgg agaaatgggg atagtcttca tgaccacaaa taaataaagg
                                                                      900
aaaactaagc tgcattgtgg gttttgaaaa ggttattata cttcttaaca attcttttt
                                                                      960
tcagggactt ttctagctgt atgactgtta cttgaccttc tttgaaaagc attcccaaaa
                                                                     1020
tgctctattt tagatagatt aacattaacc aacataattt tttttagatc gagtcagcat
                                                                     1080
aaatttetaa gteageetet agtegtggtt catetettte acetgeattt tatttggtgt
                                                                     1140
ttgtctgaag aaaggaaaga ggaaagcaaa tacgaattgt actatttgta ccaaatcttt
                                                                     1200
gggattcatt ggcaaataat ttcagtgtgg tgtattatta aatagaaaaa aaaaattttq
                                                                     1260
tttcctaggt tgaaggtcta attgatacgt ttgacttatg atgaccattt atgcactttc
                                                                     1320
aaatgaattt gctttcaaaa taaatgaaga gcagctgtcc ttctttcctc ttttaagtgt
                                                                     1380
tcagctgtgg catgctcaga ggttcctgct ggattccagc tggagcggtg tgataccctt
                                                                     1440
ctttttcagc tgttcgtgcc ttcctttctt gtatccacca aagtggagac aaatacatga
                                                                     1500
tctcaaagat acacagtacc tacttaattc cagctgatgg gagaccaaag aatttgcaag
                                                                     1560
tggatggttt ggtatcactg taaataaaaa gagggcctgg gaattcttqc gattccatct
                                                                     1620
ctactttgta taagtctcat tttgtgcctt acacatctgc agtatttatc atgttccaac
                                                                     1680
ttggtgactg tcaggcagtg caatacatc
                                                                     1709
<210> 1573
```

915

```
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (2734)
<223> n equals a,t,g, or c
<400> 1573
ggcacgagat gagctgcaag gtgcctttga cgagcacata ggaccgctct qcactgactg
                                                                      60
gcagaaggcc gagcggggag acattctcct gagcagcctc atcagaaaga agctgcttcc
                                                                     120
cgaggcctct ctgctcatca ccacgagacc tgtggccctg gagaaactgc agcacttgct
                                                                     180
ggaccatect eggeatgtgg agatectggg ttteteegag gecaaaagga aagagtaett
                                                                     240
cttcaagtac ttctctgatg aggcccaagc cagggcagcc ttcagtctga ttcaggagaa
                                                                     300
cgaggtcctc ttcaccatgt gcttcatccc cctggtctgc tggatcgtgt gcactggact
                                                                     360
gaaacagcag atggagagtg gcaagagcct tgcccagaca tccaagacca ccaccgcggt
                                                                     420
gtacgtcttc ttcctttcca gtttgctgca gccccgggga gggagccagg agcacggcct
                                                                     480
ctgcgcccac ctctgggggc tctgctcttt ggctgcagat ggaatctgga accagaaaat
                                                                     540
cctgtttgag gagtccgacc tcaggaatca tggactgcag aaggcggatg tgtctgcttt
                                                                     600
cctgaggatg aacctgttcc aaaaggaagt ggactgcgag aagttctaca gcttcatcca
                                                                     660
catgactttc caggagttct ttgccgccat gtactacctg ctggaagagg aaaaggaagg
                                                                     720
aaggacgaac gttccaggga gtcgtttgaa gcttcccagc cgagacgtga cagtccttct
                                                                     780
ggaaaactat ggcaaattcg aaaaggggta tttgattttt gttgtacgtt tcctctttgg
                                                                     840
cctggtaaac caggagagga cctcctactt ggagaagaaa ttaagttgca agatctctca
                                                                     900
gcaaatcagg ctggagctgc tgaaatggat tgaagtgaaa gccaaagcta aaaagctgca
                                                                     960
gatccagccc agccagctgg aattgttcta ctgtttgtac gagatgcagg aggaggactt
                                                                    1020
cgtgcaaagg gccatggact atttccccaa gattgagatc aatctctcca ccagaatgga
                                                                    1080
ccacatggtt tcttcctttt gcattgagaa ctgtcatcgg gtggagtcac tgtccctggg
                                                                    1140
gtttctccat aacatgccca aggaggaaga ggaggaggaa aaggaaggcc gacaccttga
                                                                    1200
tatggtgcag tgtgtcctcc caagctcctc tcatgctgcc tgttctcatg gattggtgaa
                                                                    1260
cagccacctc acttccagtt tttgccgggg cctcttttca gttctgagca ccagccagag
                                                                    1320
tctaactgaa ttggacctca gtgacaattc tctgggggac ccagggatga gagtgttgtg
                                                                    1380
tgaaacgctc cagcatcctg gctgtaacat tcggagattg tggttggggc gctgtggcct
                                                                    1440
ctcgcatgag tgctgcttcg acatctcctt ggtcctcagc agcaaccaga agctggtgga
                                                                    1500
gctggacctg agtgacaacg ccctcggtga cttcggaatc agacttctgt gtgtgggact
                                                                    1560
gaagcacctg ttgtgcaatc tgaagaagct ctggttggtc agctgctgcc tcacatcagc
                                                                    1620
atgttgtcag gatcttgcat cagtattgag caccagccat tccctgacca gactctatgt
                                                                    1680
gggggagaat gccttgggag actcaggagt cgcaatttta tgtgaaaaag ccaagaatcc
                                                                    1740
acagtgtaac ctgcagaaac tggggttggt gaattctggc cttacgtcag tctgttgttc
                                                                    1800
agetttgtee teggtaetea geactaatea gaateteaeg caeetttaee tgegaggeaa
                                                                    1860
cactctcgga gacaagggga tcaaactact ctgtgaggga ctcttgcacc ccgactqcaa
                                                                    1920
gcttcaggtg ttggaattag acaactgcaa cctcacgtca cactgctgct gggatctttc
                                                                    1980
cacacttetg acctecagee agageetgeg aaagetgage etgggeaaca atgaeetggg
                                                                    2040
cgacctgggg gtcatgatgt tctgtgaagt gctgaaacag cagagctgcc tcctqcagaa
                                                                    2100
cctggggttg tctgaaatgt atttcaatta tgagacaaaa agtgcgttag aaacacttca
                                                                    2160
agaagaaaag cctgagctga ccgtcgtctt tgagccttct tggtaggagt ggaaacgggg
                                                                    2220
etgecagaeg ceagtgttet ceggteeete cagetggggg ceetcaggtg gagagagetg
                                                                    2280
cgatccatcc aggccaagac cacagctctg tgatccttcc ggtggagtgt cggagaagag
                                                                    2340
agettgeega egatgeette etgtgeagag ettgggeate teetttaege eagggtgagg
                                                                    2400
aagacaccag gacaatgaca gcatcgggtg ttgttctcat cacagcgcct cagttagagg
                                                                    2460
atgttcctct tggtgacctc atgtaattag ctcattcaat aaagcacttt ctttatttt
                                                                    2520
ctcttctctg tctaactttc tttttcctat cttttttctt ctttgttctg tttacttttg
                                                                    2580
ctcatatcat cattcccgct atctttctat taactgacca taacacagaa ctagttgact
                                                                    2640
atatattatg ttgaaatttt atggcagcta tttatttatt taaatttttt gtaacagttt
                                                                    2700
tgttttctaa taagaaaaat ccatgctttt tgtngctggt tgaaaattca ggaatatgta
                                                                    2760
2820
aaaaaaaaa aaaaaaaa aaaaaaa
                                                                    2847
```

<210> 1574 <211> 2661

| <400> 1574 | |
|--|-----------|
| ggcacgagca caggctcctc gtggctgggg gtgctgagag ctgaggcttg gggagctgga | 60 |
| ggctctgcgc ggatggtgct ttttaatgga tctgagtgtt cctcgtgact gcatggctgt | 60 |
| gaaatattta aatggttctg cagagctcag aaaaaaaggg aattcttcct cctgcccaga | 120 |
| ggccaacaca gttagcctgg gcttgtgtgt ctgtttatgt acgtgtgcat atgtatgtat | 180 |
| gtgcatgtgt atttgtgtgt gcgtattgtg tgcacatgtg tgtctcacgt ctatgtgtgt | 240 |
| cttctgggg gatgtgtgtt tctgtgcttt tgtgactagg aacacgcaca tatatgtgta | 300 |
| gatgcccca gaaggtggaa atcctcacgg ggtctgcact tggccttctc ccagcaccaa | 360 |
| gtcctgggat ggagacccga atgagcataa gggtggcctt gaaggaaggc actttggcac | 420 |
| ttgaggtttg tgaaacttag gagcacatgc ccactgtggc cagcagcccc tgggacactg | 480 |
| caccttgcgg agcacacgtg tgatggggtg tggcccactg ggcagcttcg caagagcaga | 540 |
| actggagacg acctcagtgc caggcacagg cccttgtgtc cgggctgtcc tcacccagac | 600 |
| cctgggcagc ctgggaggaa gcccctaagt ggacagtggt gggacaggga cacacagtcc | 660 |
| gggaggtggc tctgggcaaa cctcctccaa gctgcaatct gctggtctgt agaatgggag | 720 |
| aggaacacag cctctcactt ggtgagtgcc ctggctgtgc tggggcctgg gggaatccca | 780 |
| gggagtgcag cgtcaggccc agggtgggag aggcaaagta gacaccccat agaggcttcg | 840 |
| gggtatgcat ggagtgaccc gagagcacac cagggcccca gggacagcgc tgctgggtgg | 900 |
| cccaggtaaa ggcggctgtc cctgtgcgca catgtgtcca cgtgaacttg ctacttagag | 960 |
| agcagetgat getgaaggca ggttgttgga atteccagge ccaggtgtaa geagcagage | 1020 |
| ccaccagtgt cccctgacgc ccactctctt cctcctgggc acataatttt agatgaaact | 1080 |
| gaaaaacacg cagcatgaaa gcaaggcccc tgccctctgc tggttctgta ttggctgcct | 1140 |
| cgtgtatttt tccagcetgc agaaagtcga ggcctggatg gataccatgt ccacccetce | 1200 |
| ctgtggcct gcggcacccc ggcctcccgg cctgcatctt tcatgagtct ggaaacagga | 1260 |
| tctcccagag agggccccag gaggttggct gccagcagtg ggttctcaca gctgcctcca | 1320 |
| agcaggtgac cagtcctggg aggctgtggt ctagggcctg gcaactcagg ggcgcctgtg | 1380 |
| gacaaayyye egyyeeaagg ggetggeagg tttgtcetga gtgactgaag agggaggaa | 1440 |
| cagggcagct tgagaggggc agactcttgc tccagagaaa gaggaagttt ggtacttagc | 1500 |
| ttggaatgaa gggccagccc tagagagagac cttcctgtgg caggagagag ggccatgtcc | 1560 |
| tgccagggga agtcctggga ggcttcctgg aagcagtggc ctctgtgtgg ggccttggag | 1620 |
| cttgagagtg tctggcacca gggaaaggca ttgggggctt cgagagaact gcagggggcc | 1680 |
| ctgaccagat aggcccctaa ggcaaagagg attccatcag aactcgcatt cccatttat | 1740 |
| tactctggga agtaatgtgg aagctaagct ccactgtatg tcgtatgctg aggcatctgt | 1800 |
| tgagcetetg etgtgteggg geegggetet gggtggeeca eeteagtgaa gtettgetge | 1860 |
| taatggccga atagttctgc aaggcctgtg ctgaggcctg gagccggccc gctggggctg | 1920 |
| gaggcacggg cccatcaacg tgaaccatta cgccagcaag aagagcgcag ccgagagcat | 1980 |
| gctggacatc gcgctgctga tggccaacgc gtcccagctg aaggccgtcg tggaacaggg | 2040 |
| ccccagttcg ccttctatgt gccctggtg gtcctcatct ccatctcct tgtgctgcag | 2100 |
| atcggcgtgg gggtgctgtc atcttccttg gtaggtcccc aggtgggggc agccaggcca | 2160 |
| cctgctcacc ttgctggcat ctgctcgcat cgcctgggac aggtgcccac caccttgcac | 2220 |
| acttggctct caggagctgc cgattcctgg ccctcatcac ccagacatgc agtccaggaa | 2280 |
| gtggcacccc ccctcccccc accetgcact ttggtttttg ttttgttttt | 2340 |
| tgaaacaagg tccccctctg tcacccaggc tggaatgcag tggcgcagtc tcggctcact | 2400 |
| gcaagctgca tctcctgggc tcaagcgatc ctcccacctc agctcccagc tctcaggagg | 2460 |
| Clyddytagg agaattgett gaacetggca gggcagaggt tgcagcaagg cgagatgaag | 2520 |
| ccactgctct ccagcctggg tgagactgtc tcaaaaaaaa aaaaaaaaa gaaagaaagt | 2580 |
| aagaaaaaaa aaaaaaaaaa a | 2640 |
| | 2661 |
| <210> 1575 | |
| <211> 994 | |
| <212> DNA | |
| <213> Homo sapiens | |
| | |
| <400> 1575 | |
| ggcacgagtt tttttctttt tatttgagaa aagggggggt tgagagtaga gtgggaatgg | 60 |
| caayaaytay tatgacagag cttcttctct ttttttcccc tctttaccag gaagttaagt | 60 130 |
| agaagteete atgeatgitt ttaaaacaaa gitggtaatt agcataacet agttagttag | 120 |
| cittadadag agigadagaa tiaaaaagit gadaagccca tcagacctca gadagaacet | 180 |
| accyddagyd ggydgaccag tgagtctaga ccaataggtg ggttaggcet cetgaatgag | 240 |
| agcctagaag tttagacttg attctatagg ctctggggta cctacaagtt tgtagtcgga | 300 |
| | 360 |

```
gccttgggaa ttgaatgtta cataggaact ttcactggtt ccagctagcc ttggctgtta
                                                                     420
gcaattattt ttatctactt taacaggggg gacagagtag gggggcagga aactaagctg
                                                                     480
gcattatggt cacaggaaag aacagactga tttggagcct ttcaaactgc agacctttgt
                                                                     540
tactgaccga tgcttaattt ggtttctggg ttttgttagt tttttcccct gcccttacct
                                                                     600
catttacctt aacgacagct cccccctct agagctcagc tagggcaggc tgccactgcg
                                                                     660
gattgggggg ccaagaggcc cagggcaaga agaaagtggg ttgaaagcag agttctgttt
                                                                     720
aaagaatttt ctgctggaaa ctagcccaga gggagtaaag aggaacttta atgaggagca
                                                                     780
gctgcagtgc cgacgcaacc cacatgagac tttttttcc ccttcgttcc acattctgta
                                                                     840
tagttttttt aaaaatcatg actttgaaat agctgttttg taaagcatgc ctctctttt
                                                                     900
cttcttgtat gtggtggggt tttgctttgt tgttgttgtt tttttttgaa tggccaaatc
                                                                     960
ctcgttttaa aaaaaaaaaa aaaaaaaaaa aaaa
                                                                     994
<210> 1576
<211> 793
<212> DNA
<213> Homo sapiens
<400> 1576
gaaccagttt ttttctgact gcctccagca tgagctgaat ttccgtctgt gcagttatcc
                                                                      60
tcagccaatt gaaaatcacc tggagttgta ttccaagcac aaaagaaggt cagagagtgg
                                                                     120
aggcccgatg atcatgatcg ccctgtctcc agggcctagg ctggaaggag tcctgcagcc
                                                                     180
tttgtggctc aggaccagag agctgacctt gaccctgacc ttgtgatccc aggcatcagt
                                                                     240
ggctggaaat tcctttcatt ttattgttga gcccagaagc gcccagctct ctttggcaag
                                                                     300
gttaagctag ggtaagaggc actgttacta gagtgaccag agttctttaa gcgtcgctct
                                                                     360
gctattactc agttaacctt attaataccc tgcctggcca acacagtgaa accctgtctc
                                                                     420
tactaaaaat acaaaaatta gctgggcatg gtggcaggcg cctgtaatcc cagctactcg
                                                                     480
ggaggctgag gcaggagaat cgcttgaacc caggaggcag aggttgcaat gagccgagat
                                                                     540
600
aaaaaaattt ttaaatataa ttcacataac ataaatgtaa ttatttggcc tggtcctggt
                                                                     660
gactcacaac tggattccca tcactttggg agactgaggc aggaggattg cttgaggctg
                                                                     720
ggagtttgag accagtttgg gcaacagagc aagaccctgt ttctttaaaa aaaaaaaaa
                                                                     780
aaaaaaactc gag
                                                                     793
<210> 1577
<211> 1482
<212> DNA
<213> Homo sapiens
<400> 1577
gtttttattt tgttgtagag atgggacctc agtatgttgc cacggctgac cttgaactcc
                                                                      60
tgcactcaag ggattttcct gccctggcct cccaaagtat tggtattaca ggcatgagcc
                                                                     120
attgtgccca ccgtctctgg ttcttaacct tctgcctccc tcttccagtt ttaaagaatg
                                                                     180
cttgtaatta catgggctct cctagatact ccaggataat cttgttttaa ggtcagctga
                                                                     240
tgagcaacat taattttatc tgcactctta attccccctt cctatgtaat tgtgctgtgt
                                                                     300
aacataggac atgagcaatt ggtggcggtg ggggttatta ctttggccac cacagtaact
                                                                     360
attttatgcc aggtactcag ctaagcactg gtgaattaag catgaataac acacactccc
                                                                     420
taatctccat ccattcatgg gaggagcacy tcacctgcca tgctcctgag aatctcggga
                                                                     480
gtcagagaag tettetatga ggaggtgatg ecaaagegga caagtgacag aggagtegaa
                                                                     540
gctagctagg magagagtag aggtttaagg ggaagcatak tataagcaga ggatattacc
                                                                     600
cacttcagag actcccagag gagaaagagt gtgcgttsaa ggggcagatg aggctcagtt
                                                                     660
ggactccata gcagatgwaa tggagagggg caagcagtga ggctgccttg caaggcaggg
                                                                     720
cagagcaggg gctgttaagg agtttggact taatccctga ggcaaggaga agtgatgtaa
                                                                     780
atgggggagt aacatgatga gattcatgga ttagagacat ggctcaggct gctgtagaga
                                                                     840
aggtgccagg gagagcagat ggctcaatgg gtgtgcagga gacctctcac tgagtttagg
                                                                     900
gagaggtttg taaaacagaa gaagtttgag taatttaaat gatgatggga aggagctaaa
                                                                     960
agtgggggat aggttaaaga tacaggaaaa aagaaagaaa agaaaaattc catatctgag
                                                                    1020
tgtttactcc tgagtttttg agattgctat taagatcgtg ctctactgtg atgatttggg
                                                                    1080
tttgtttgat aatcagaaaa aagcatattc ttttgggtgt tcagccacac tgctttggtg
                                                                    1140
tcacaactgc acattggttt cacagctgca ggagcaagtt cgagcatctt aaaatgattc
                                                                    1200
aacaggagga gataaggaag ctcgaggaag agaaaaaaac amctggaagg agaaatcata
                                                                    1260
gatttttata aaatgaaaag ctkcctctga agcactgcag actcagctga gcacygatac
```

1320

```
aaagaaagac aamcatcgta agaagcaata gtttctctta ctattctgag agccttatca
                                                                      1380
 ttctacatcc catcttcctg tgagwttgtc tttgtagcat ttaactctaa ttgcagttct
                                                                      1440
 cwttttaaaa aytggcttgc ttattgtata ttttccccaa ct
                                                                      1482
 <210> 1578
 <211> 1336
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> SITE
 <222> (221)
 <223> n equals a,t,g, or c
 <400> 1578
gggcacacgt tgtacgtgct gacgtagccg ggctttccag cgggtatatt aggatccgtg
                                                                        60
gccgcgcggt gcgctccaga gccgcagttc tcccgtgaga gggccttcgc ggtggaacaa
                                                                       120
acactcgctt agcagcggaa gactccgagt tctcggtact cttcagggat gagtcatgtg
                                                                       180
gcagtggaaa atgcgctcgg gctggaccag cagtttgctg ncctagacct gaactcttca
                                                                       240
gataatcaga gtggaggaag tacagccagc aaagggcgct atattcctcc tcatttaagg
                                                                       300
aaccgagaag ctactaaagg tttctacgat aaagacagtt cagggtggag ttctagcaaa
                                                                       360
gataaggatg cgtatagcag ttttggatct cgtagtgatt caagagggaa gtctagcttc
                                                                       420
ttcagtgatc gtggaagtgg atcaagggga aggtttgatg atcgtggacg gagtgattac
                                                                       480
gatggcattg gcagccgtgg tgacagaagt ggctttggca aatttgaacg tggtggaaac
                                                                       540
agtcgctggt gtgacaaatc agatgaagat gattggtcaa aaccactccc accaagtgaa
                                                                       600
cgcttggaac agtaagtttt tgaagtgtat gttacttgtg atgaagcctt actagctagt
                                                                       660
ataacaaatg aacttatcca ttttttgatt tgagggaact cttttctgga ggcaacactg
                                                                       720
ggattaattt tgagaaatac gatgacattc cagttgaggc aacaggcaac aactgtcctc
                                                                       780
cacatattga aagtttcagt gatgttgaga tgggagaaat tatcatggga aacattgagc
                                                                       840
ttactcgtta tactcgccca actccagtgc aaaagcatgc tattcctatt atcaaagaga
                                                                       900
aaagagactt gatggcttgt gcccaaacag ggtctggaaa aactgcagca tttctgttgc
                                                                       960
ccatcttgag tcagatttat tcagatggtc caggcgaggc tttgagggcc atgaaggaaa
                                                                      1020
atgaaagata aaagaaaaaa taatccaaat gtctgtcact agcggactag ttaaaaaagc
                                                                      1080
attgcaagct gggcacagta gcattcacct gtgaatacac tctactccac tctgggtaac
                                                                     1140
atgaggaggc ctccctacct tcctaagaaa acccaaacaa gcactgcata tctacacggc
                                                                     1200
tgagtctaca aacatttaac acaaaagaag aaagacatag gaaactcttg atattccctc
                                                                     1260
atgggatggt ctccatgata cattgttaag aagaaataaa gcaaggtgta gaaaaaaaa
                                                                     1320
aaaaaaaaa ctcgag
                                                                     1336
<210> 1579
<211> 2253
<212> DNA
<213> Homo sapiens
<400> 1579
gacacgagee tacactgaca geceetacte ttgeeetget tetgetgeeg aaaattteet
                                                                       60
gcctcctgac ttctacccac cctcggaccc agggcagccg tgcccatttc cccagggcat
                                                                      120
ggaggacccc ccagacaccc agttctatgt aggatcttct ctgccacagg ctggaccctg
                                                                      180
gagagtttct gcacccctt caggaccccc acagttcccc gctgtggtcc ctggaccatc
                                                                      240
gctggaggtg gcccgagctc acatgctggc tttggggcca cagcagctgc tggcccagga
                                                                      300
tgaggagggg gacacgctcc ttcacctgtt tgcggctcgg gggctgcgct gggcggcata
                                                                      360
tgctgcggct gaggtgctcc aggtgtaccg gcgtcttgac attcgtgagc ataagggcaa
                                                                      420
gacccctctc ctggtggcgg ctgctgccaa ccagcccctg attgtggagg atctgttgaa
                                                                      480
cctgggagca gagcccaatg ccgctgacca tcagggacgt tcggtcttgc acgtggccgc
                                                                      540
tacctacggg ctcccaggag ttctcttggt atggccagct ggcaggcagg ggtttgtctg
                                                                      600
gggggtagac tggttgccca gattttggct tccagggcca ggaggccagg ggataccctt
                                                                      660
acccagcagt ctgccttctc ttcctcccag gctggcttaa ctctggggtc caggttgacc
                                                                      720
tggaagccag agacttcgaa gggtaaagtt gggtgtggca aggggctggg tgtgggttgg
                                                                      780
ggtggcttgg ccaaggtggg tgcagatgcg ggtccctcac tgtctccatt ctgcaggcct
                                                                      840
caccccgctc cacacggcca ttctggccct taacgttgct atgcgccctt ccgacctctg
                                                                      900
tccccgggtg ctgagcacac aggcccgaga caggctggat tgtgtccaca tgttgctgca
                                                                      960
```

```
aatgggtgct aatcacacca gccaggagat caagagcacc aagacagttc tgcacttggc
                                                                   1020
cgtgcaggct gccaacccca ctctggttca gctgctgctg gagctgcccc ggggagacct
                                                                   1080
gcggaccttt gtcaacatga aggcccacgg gaacacagcc ctccacatgg cggctgccct
                                                                   1140
gccccctggg ccggcccagg aggccatcgt gcggcacctg ttggcagctg gggcggaccc
                                                                   1200
cacactgcgc aacctggaga atgagcagcc cgttcacctg ctgcggcccg ggccgggccc
                                                                   1260
tgaggggctc cggcagctgt tgaagaggag ccgtgtggcg ccgccaggcc tgtcctctta
                                                                   1320
ggactcaaac ccagaccctg gactgatttt ccagtcccca ccgtcctgcg ggacagccag
                                                                   1380
cgtatgctaa tgttgcaaac ccatgataat gtatgtggaa tatcctgcca ttggggtttt
                                                                   1440
acgttaaaac cccagaatgg ctgcagaggg gtgaacaggc cccaatattt ggggtgctgt
                                                                   1500
gatacccctc ttctacccac aaggagccct cttgatgatt tctgtgaaat cgaggcccct
                                                                   1560
tgattgtttc tgtgaaacac cctgcacccc tagtcctttc cccactgaga tctttcgggt
                                                                   1620
teteteceet aacteagete ttegtteeca gaaacceaga tgtaateece etacgtggtg
                                                                  1680
cttggggcat cccgatacca tctcagtaaa tctcctacaa tggcctcctc accctccccg
                                                                  1740
ggacccacac ccttcaggtc ctcaccctga gacaggaggg accctctgag atcagggacc
                                                                  1800
cttaggtete actgetetet gatteagage teagetggge ecceagttee agaceceage
                                                                  1860
attcccggtc actccctccc taatctgagc atcactcaag ctctttatta aactcaattt
                                                                  1920
gggccagatt tggtggctca tgcctgtaat cctaacactc tgggaggccg aggcgggcgg
                                                                  1980
atcacttgag gtgaggagtt tgagaccagc ctggccaaca tggtgaaacc ctgtctccac
                                                                  2040
taaaaaataca aaaacaattg gctggacatg gtggcatgcg cctgtagtcc cagctacttg
                                                                  2100
ggaggctgag gcagaagaat tgattgaacc caggaggcgg aggttgtcag tgagccgaga
                                                                  2160
ttgtgccact gcactccagc ctaggtgaca aagagagact ctgtctcaaa aaaaaaaaa
                                                                  2220
aaaaaaaaaa aaaaaaaaaa aaa
                                                                  2253
<210> 1580
<211> 1481
<212> DNA
<213> Homo sapiens
<400> 1580
ggcatcaacc ccgtggtccc aggggagacc tccgctgagg ctcgccccga gactcgagcc
                                                                    60
cagcccagca gccccctgga agggcaggcc gaaggtagag accactggtt cgcaggaggc
                                                                   120
cccaggaggt ggacacagcc cctccctcc tgaccagcag cccatctact tcagagagtt
                                                                   180
ccgcttcacg tctgaggtcc ccatctggct ggattaccat ggcaagcacg tcacgatgga
                                                                   240
300
gaagctaaag cggctctgtt gcaggcacgg gctcctgggt gtggacaagg tgctgggcta
                                                                   360
tgccctcaac gagtggctgc aggacatccg caagaaccag ctgcccggcc tgctgggagg
                                                                   420
cgtgggcccc atgcactcgg ttgtccagct cttccaaggg ttccgggacc tgctgtggct
                                                                   480
gcccattgag cagtacagga aggatggccg cctcatgcgg gggctgcagc gaggggctgc
                                                                   540
ctcctttggc tcatccacag cctctgccgc cctggaactc agcaaccggt tggtacaggc
                                                                   600
tatccaggcc acagctgaga ccgtgtatga catcctgtcc ccggcagccc ccgtctcccg
                                                                   660
ctccctgcag gataagcgct ctgcgcggag gctgcgcagg ggccagcagc ctgccgacct
                                                                   720
gcgggagggt gtggccaagg cctacgacac agtgcgagag ggcatcttgg atacagctca
                                                                   780
gaccatctgt gacgtggcat cgcggggcca tgagcagaag gggctgacgg gcgccgtggg
                                                                   840
gggcgtgatc cgcagctgcc ccgactgtgg tgaagcgtca tcctggcacg gaggccacgt
                                                                   900
cagctgctcg ggggcatgcg caaccagatt gtcccgacgc cacaaggacc acgcctcaag
                                                                   960
tggcgctcgg acagtgccca agactgagcc tggggtgccc ggcacccaga gggtgctgcc
                                                                  1020
caccatgete etgageetee caagagetge ageceaeggg eeeggeeegg eetggeeett
                                                                  1080
caggggatgg ccactgtgaa ggacgccttc ccagcctgcc cgttgccaat ctgctgtgag
                                                                  1140
aggggggcct ccctgccttg gggccttagc cctggctctg cacttttcct ccggggagaa
                                                                  1200
aggacactgc ccctcccccg acctgggccc acactgctgc cttctcccag gacggaggct
                                                                  1260
tttggaccct cggaccccat cccactcagc caagtgtctt tctgtgtctg gggggaggag
                                                                  1320
gggatgatat ccgtgtggtt cgatgtatta tttttaagct ccgtgagtgc gtgggtcagt
                                                                  1380
1440
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a
                                                                  1481
<210> 1581
<211> 1268
<212> DNA
<213> Homo sapiens
<400> 1581
```

```
tacacaaact cttaagaaaa caaatattga tatccaaaac attttaataa ttacattgaa
                                                                      60
attttctatt gcagaaactg tgtttccaat ctaaattatt aattaatcct aaccctttcc
                                                                     120
tgctctgggt ttgtgttttt gaattcagta catcatctta cagtttttgc ttttgttaaa
                                                                     180
atactggaaa taattttgag gaagaaaaga aaataagaag tgatatgtca ccttctaaat
                                                                     240
tgtctttcct aacttagaag caaattcgaa tgtctctagt atggcttttc tctccttatt
                                                                     300
tecectatea tecettitet caeactiete titattiaaa aettgiette aaageacaea
                                                                     360
aaatagagtc gataagagtc tatccagccc tgatttctct tggccaagga atgaaaggct
                                                                     420
gttctctaaa ccttgatagg taaggaatag ccccctgtcc acctccatct tagtctgtat
                                                                     480
tgctgtaaag gaatacctga ggctggggat ttataaagaa aaaaggttta tttggctcat
                                                                     540
gattttgata tctgtaaaag ttcaagattg gacattgaca tctggcaagg gccacaggct
                                                                     600
gcttccactc atggccgaag gcaaagagga gccagcattg caaagatccc atgatgagag
                                                                     660
aggaagcaag agagagagg gaggtggcag actcttttta acaaccagtt ttctcagggg
                                                                     720
ctaaaagagt aagaactcac tcacctgcca tccttacccc cacagccccc aggatttctc
                                                                     780
tattcatgag ggatctgccc ccatgaccca gacccctccc attaggcccc acctccaaca
                                                                     840
ttggggatca aattttaaaa tcagagttgg aggcgacaag tatccaaact atagcaccca
                                                                     900
caaaccatct agtttatctt attattataa cctgtcatcc taaaagttct caaaatctgg
                                                                     960
ctgggcgcag tggctcacgc ctgtaatctc aacattttgg gaggccaagg tgggtggatc
                                                                    1020
acttgaggtc aggagtttga gaccaacctg gccaacgtga tgaaaccctg tctctactaa
                                                                    1080
gaatacaaaa attagccagg catgatggtg ggtgcttgta atcccagcta ctctggaggc
                                                                    1140
tgaggcagga gaatcgcttg aacctaggag atggaggttg catgagccaa gatcacacca
                                                                    1200
1260
aactcgag
                                                                    1268
<210> 1582
<211> 1637
<212> DNA
<213> Homo sapiens
<400> 1582
tetgeeteec aaagtgetgg gattatagge gtgageacca tatetgttet actgtgaaca
                                                                      60
ttttaatgtg tttttttgga ctttttctaa atacatgcaa atattatgta tgtaggtatg
                                                                     120
tctgagtttt ttgggttttg ttttgttttt acaaaaatga gatttcaatg ttctctttac
                                                                     180
ttgtcaaaat gtgtgtgcag atgacagttg gaagagatgc cagatgtaaa tttacctccc
                                                                     240
teceeteet etgaggettg ettgeeceat getgtggtte tgtgtgacet eatggaeagg
                                                                     300
agagatttct gtggcattca ggcaatgcag cagggtctgg ccactgacac aacaaacttg
                                                                     360
tggttttcaa atacaagtca tacagccaag acacagtgct tgggtttcag ggcctggcat
                                                                     420
agtccagtgt ctgattgatt tttaaccagc tagtgaataa atttgtaata aatgatccag
                                                                     480
ctgaagatct caatgattta actgcaatga aattgcaawg aaacttccca gkggctaaaa
                                                                     540
ttttgtgktt cacatttgca ytgctgttag cacaaaagkt aattatgatg tgtgtgaaaa
                                                                     600
atgktagtct gattagttgt tcacacaca aaaggagtgc ttttcacaca tcttaattgc
                                                                     660
ttttctgcta aagaaagtgt aactgcaagt cataaaatta taacagcctc taacacgtta
                                                                     720
attccatttc atcagcggat gatgtatctt gaattttggt gaaaagtgac tttagaactc
                                                                     780
atattgatga ggaaagttga ggttaagata ctgctctcat agaagacaat tataaaaaat
                                                                     840
tatagttcat actcataaat acacacgtct ctgtacagaa gtatcgtgaa ttactatttt
                                                                     900
gggatagtgt cttaggtttt actttcttgc atttcgttac ccacatggac cagtagatta
                                                                     960
acagaaaata tggccccaga aagaaagagg atacaggcta aagaagtaaa tcaaagaact
                                                                    1020
cgatagcttt tctgaaggct aaggtagaga aaatcatctt gaaattcaac acttagaaga
                                                                    1080
gaagaaaggg ttttaaagct gcataaaact aagaagaacc tgaaacaggc agaacaccag
                                                                    1140
agtttctatc agagagtagg taaaatggct agttttttca ccactaagaa aggagataaa
                                                                   1200
agtttctcca gcttaaagga gggagggatt aaaagagacc tgattagtgt ctacatgctg
                                                                   1260
cttgcatccc agagatgggc agcaggaacc ccaaaaagct ttaagaagat ggagaatatg
                                                                   1320
gggagttttg tttctattct cattgtatag ccaggggaaa ctgcaagtct ttcagagaaa
                                                                   1380
tgccttgtcc agcacagtgg atgaggaaag atctgagtgg gtggaactga gaggagcctc
                                                                   1440
acccctatgt cagaggcaga ggcgtttaaa ccatagcaac tccatcttga ataggggctg
                                                                   1500
ggtaaaataa ggctgaggca ggagaattgc ttgaacctgg gaggccgaag ttgcagtgag
                                                                   1560
ccaagatttt gccactgcat tccagcccgg gcaacagagt gagactcctt ctcaaaaaaa
                                                                   1620
aaaaaaaaa actcgta
                                                                   1637
<210> 1583
<211> 2127
```

| <100× 1502 | |
|--|------|
| <400> 1583 | |
| ggcacgagga ggaaggcagg gtgggctccc gcacgggagg agggccccgc tcaggccatt | 60 |
| ggctgtctcc tcgctgaagg tggacggcag atgccccagg cctagccttt aaccctaacc | 120 |
| gagatgctca gagcagcttt aaaggtcagc ctctccctgg cccaggatgg tactcggtac | 180 |
| gtcctgactt ccctggaatt gccacttgcc tttgtcatgg gtactaggtt gggtgatttc | 240 |
| tgctgatcct gagctttgct tgctctgccc caccaccaac ctggtagatg ccaggggacc | 300 |
| ggccattgcg gggtccagga caaggcagag cgaggaaagc agagcacgta cctcctgact | 360 |
| ccagggcgta atctgccagc ccgatgcggt cctcactgta tcgctgcagg gcctgcttca | 420 |
| cgatgtggtg cacctgctgc aatgcaggca ccaggagacg gttgcagcag ggagcagacg | 480 |
| tgtcccctg tcacctcgtg gccgtgggcc aaggacccat gggctgaccc cttctaggct | 540 |
| tgcactgtgc tggtgcccag gcagatgtgg gcacactgcc acccacccat gccagcccca | 600 |
| cagcatgcaa agcctcctgc ttggcacttc catcctggaa cctgccaggg tagctggcag | 660 |
| tgtgggactg tccagggctc ccagggagga gagctgtggg tgggtgtgtg gagggggcat | 720 |
| gtgggcctca cctcctctgt cactccaatc acaccttctt tctgcagcgt caggctcagg | 780 |
| gaggecgegg cttccctggc cgacttgccc tgcatctctg ccacatgggt gaggatcttg | 840 |
| ctctccagct ctcgcagctg agcttgcatc tcctctctct gaaggagccc cacgcggccc | 900 |
| cctccacctc gggcaaggaa ctgactgatc caggccggga actgagattc cacctatagg | 960 |
| aacccaaagg ggtgtcaccc tgggggggctt gcagggacag caggagctgc tatgacaggg | 1020 |
| ctagtgctta gctggatagc agggataggg taggagggag gccactggag gaaagagtta | 1080 |
| tgaacactcc atgggcacta acaaaaacag gaagaacgcc tgtcagtgag agcccacatg | 1140 |
| tgtcaaggcc aacgccacag tctcttgggc ataacagagg ctgcaggggc aaggggtgct | 1200 |
| gctttgcagg ccccaggaca cgtcgtctca aaggaggagg agagggacca gcagggcct | 1260 |
| ggtggttccc actcacgtcg tcccgcacgg cctggatctg ctggggcagc aggcccactt | 1320 |
| cttccgccac cgagctctgc ttcagtgcca gagccgccag ctcctgctgc aggccggcca | 1380 |
| getggteete eageegeete ageteettea eagagetete etggaaggae teetggtea | 1440 |
| tgctggtccc agagagagaa gagtaagcct cggatctctt tggtgggagg taaggccaca | 1500 |
| ccaaagatga aagaggaccc cctagtgggc tcccgtcagg agagcgggtg cccagcactc | 1560 |
| attgtgaacc tgagaagggg caaggcctct cctgggggtt ctgcctgcag aacccctgcc | 1620 |
| tgtcccaagg agctaattct gagcctgctc cctttctaag cccagagtcc agaatgtact | 1680 |
| ctgcctcagc ctctcacatc cctccacaag catggacatc tggggcatga gaaggcagtt | 1740 |
| atgtgagget gtaagaaagg atgetgtgte tataaatgaa teeeggteet eteacacage | 1800 |
| ctgcccccg ccctcaggac cccctgcta acctccatgg cacctcaaag acaggccctg | 1860 |
| ggcaggggtc ctgagctggg tttcaacccc tcccctacc atctgcttgg caagatgatc | 1920 |
| agaactetet getetgegge tetgeteece agteetgeet ggagagtggg tggggetggg gaggageagg eegaggeeag etggtggegt eeeagtacet ttgeeactet gaetteaget | 1980 |
| getggatggg agceteggae teetgtgtag gaagaaggga caaatacaag aaatacteat | 2040 |
| ctcagaaaaa aaaaaaaaa aaaaaaa | 2100 |
| | 2127 |
| <210> 1584 | |
| <211> 1551 | |
| <212> DNA | |
| <213> Homo sapiens | |
| | |
| <400> 1584 | |
| ggcacgagcc tgcctcagct tcccaaggct cactgtgctg tgcaaatatt aactcattat | 60 |
| ceteataaca acceeatgaa titagtaett totgatetae attitacaga caggaaactg | 120 |
| ceagagicag aattigaaat caggigitet ggeteecaag tecatgeigt gaaceteigt | 180 |
| accepted telegatete gegetateeta geteeteaga aaattettet acagtagaag | 240 |
| receaggaaa geeetcaggg tgteecaaaa eteetgaaat tetatggcaa aatgttgtgt | 300 |
| gtacattttt cagcaagaga gtcagtggct ttcctctgtt tgtccaaagg gtctacagtg | 360 |
| cagaacagtt tagcaccact tacctagagg acctttttgt gtcctttcca ttgttaaaag | 420 |
| goldeligtig goalaaggat tottitiggaa gaacaagatg titacaaacc cattcagact | 480 |
| tollagataa caatgiicta aattaattgo ttatooggit gatottootg ggaactiitt | 540 |
| cocaaatatt tatgocaggt cocagattoa gagattgtaa ttatttoatg yagggtaggg | 600 |
| ectggeatet gttttgaaaa geettteeag atgattetga tacaggtett cagttaagaa | 660 |
| Coactaatat tatoototag agaatgggga tactacttta tagtcaaaga taatcacttg | 720 |
| catticacat gagacettta catgacecae cattagecta ceccatcae eccagette | 780 |
| actititit tittgaggca gitcactcit gicacccags ccagagigca aiggcacaat | 840 |
| ctcggctcac tgcaacctct gcctcccggg ttcaagtgat tctcctggcc tctaaattct | 900 |
| | |

```
agatctccaa atctggcttc tagggtttgg gatcagggaa tgaggatttg tccaaaggca
                                                                    960
tggggtggga aaaaagactg tttgtttaca agaggtaaga tgtcaggaag cagcaatgtg
                                                                   1020
cttacaccac tgaggtaggt gtgccctttc agggggggag tttccattct ggggatcccc
                                                                   1080
attctgaggt ttcccagaag gggacagttt tcaagcccac tttcctgacg gttgcatctt
                                                                   1140
gtcgcaggtt tcatctcacc tttgtcttgc tgcccgcaat ctctggcttg gtcagctcag
                                                                   1200
gaaacccctg gtgccagaga tccggatgaa gatgagggac tagttcggcc tgttgcggta
                                                                   1260
tctcagcggg gtgagacgcc tcggtgggga aggcagagtg gaaaacccga cgccttccac
                                                                   1320
cagcaactct tgtgaatatg tgtgtgttgg ggttatgtgg ctagccagga gtggagatgg
                                                                   1380
atagtgtggt ctgcagagga tgcattttgg agctgacaga gctgagtttg agccctggtt
                                                                   1440
ctgccagtgc tggctaggct gtgcacccct gggcaagggt cttcacctct ctgggctcat
                                                                   1500
1551
<210> 1585
<211> 874
<212> DNA
<213> Homo sapiens
<400> 1585
ctgcaggctc atacacagtg gagctgacct ggctgtgcta ggttcttgga agtcctggct
                                                                     60
gaactcagag aactggttct tgggccatgc cgggggtgca ggcaagtaag cctgcatgtg
                                                                    120
ggtgaaaggt agccccagca gcaaggctgt aaggaaaaga gggaatgagc acttagtgta
                                                                    180
cacctaccgt gtgccacacc ccctccatat gttgcctcat tctggccact ccgcagcctc
                                                                    240
tggtggtgcc tcatgcccac tttgcagagg atgagccaca ggttctgatc aggtgctgga
                                                                    300
acaaaccacc cttsttaagt gagtccccca cgaacttaga atttgagact cactcattgg
                                                                    360
ccaggctcaa tggcctctgt tctgctatca agaggctgct gggatgttac ccatggcagg
                                                                    420
gatagatggg gaagtcacca tattcaaaac aatcatgtgt tgaaacacct ccccagcttc
                                                                    480
tgatctaccg gyagtggyag cggaagcaaa yacagcaaat ctgaaacccg atgcctacag
                                                                    540
aacaggggtg tgaaatgtga cgccagaggc ccccacacag aagtgggtgt ggacagccac
                                                                    600
ctgcctgtga gcaaccaggg gaagctagct tggtgccgag tttacacagt gaatgttaaa
                                                                    660
aagacttcga agctggcccc agtgtattcg cacacagttg agaaaggcca gggaggataa
                                                                    720
caagggctag aatatagggt cagctcccta cagttgctgt aaccccctgg gcagctccct
                                                                    780
ttacttctct gagcttcagt gacctcctct gtaagtgagg ataacatttc ccagagtgag
                                                                    840
gattaaataa aaaaaaaaaa aaaaaaaact cgag
                                                                    874
<210> 1586
<211> 942
<212> DNA
<213> Homo sapiens
<400> 1586
ggcacgagac catgtctgcc ctcccctctc ccctctgccc cttctgctct gtgctccttc
                                                                     60
tcccgagtcc cccagcccgt gtccctggcc tctgtcttct ctttctctcc ctcccacccc
                                                                    120
taacacctcc ctccactgtg ggaacctgta aaccccaggg ttgtgcccct tcatggtccc
                                                                    180
ccatccaccc ccgcaatgtc tcatgctcga tatacaaagg ccatggtgac tttgggtgac
                                                                    240
atttgggtgc tgtggagctc agggtggaaa tttccttccg gccttgtgat ttcaaccctc
                                                                    300
etececeaca catgettggg getgttttga geacageagg ttgccagete catecacete
                                                                    360
ccggtaacct atccgagtag ttggagttag ggagaaccag gctggggtga gggcatcagc
                                                                    420
aggccccctg cagcaacagc agcagcaact ctcattttct gagggggcta cttactgtat
                                                                    480
gccagtccct tcatattcat ctcagcaaac ccaccgtacc gtgcctcccc aaccagttag
                                                                    540
aaactcagtt gcccacaggg gctgggcagg aaggtgaggc aaacttgggc tgtccttggc
                                                                    600
cggatctcct gcatctggct cccaagggaa gccataaatc cagattttta aatgtaaacg
                                                                    660
cctgaatttt aaatgttggt aatcaattca cttaaaaaca tcaccaccac caccaccacc
                                                                   720
accaccaaca aaaaaacccg tagacttgtc cctgttacag gcactaggaa cacagcaggg
                                                                   780
aacaatcaaa aagtccctgg tctggccagg caaggtggct catgcctgta atctcagtac
                                                                   840
ttcaggaggc caaggcagga ggatcacttg agcccaggag ttcgagacta gcctgggcaa
                                                                   900
942
<210> 1587
<211> 1124
<212> DNA
```

| <400> 1587 | | | | | | |
|--------------------------|------------|------------|------------|------------|------------|------|
| aaaattataa | ttgaaaacaa | aatctgacat | tctctgctaa | gtcttatctg | aatgcttcag | 60 |
| ataatggtag | tgtagtcagt | gactaaaata | tttttatcaa | atttcctctc | tgtagacgcc | 120 |
| tgcaggtatt | gacgtctgtc | agatctcgtc | acattggctg | gtgccgcagc | tgttggagag | 180 |
| tatttttctt | tatgattatt | ttagaaaaaa | aattttcttt | tccacaatgt | ggttctctta | 240 |
| gaagaatgac | gtatcttctt | ttcctcagcg | agttggacac | attgtgccca | gggcagccct | 300 |
| gtccttgggc | agcgaccgca | caccaaagct | gggaggaggc | tggtccgggg | ggcctgggca | 360 |
| gaagacagtg | atttgcaggg | gtggctccca | gacaccctgc | ccagggatgg | gctgggcacc | 420 |
| acctgggggc | ggagcgtgag | ctccagacga | gctcctgcgt | gcgcgtgtga | gtktgtctgc | 480 |
| | | | | | ccaggttgcc | 540 |
| cctccagacc | sctcccaacg | tcagggggaa | ggaaacgttg | actttcactg | cactttgatt | 600 |
| cgtctctaaa | ccatttgctg | gggattcctg | agagcagagc | tcccagcggg | ccctgcctcc | 660 |
| caagteeege | cgcaaggcta | cctcgggtgt | gtggatgtgc | gagggcctcc | cccgcttgcg | 720 |
| tagaggacat | gegtgetgga | acctgtcgga | actccatgcc | ttcctcgcct | gctcacctgc | 780 |
| tataaaaaa | ragatagaaa | ggtgcaaagg | gacgcagacg | tctgggacag | ctaaggcccg | 840 |
| gtactgga | tatttagaaa | tattttaan | ggtttcaacg | aataagcaaa | actcgggcaa | 900 |
| gractgrage | gtgtaggett | agtagasta | accacagtet | ctttagaact | aagcctattt | 960 |
| ataaaatcaa | acaattotaa | ttaataatt | ggagacaggg | aggeceegea | catcacacag | 1020 |
| actatagecag | acaactytaa | aaaaaaaaaa | aaaaaaaaa | agttgttttt | taaataaagt | 1080 |
| accegadae | gcacgagaaa | aaaaaaaaa | aaaaaaaac | tega | | 1124 |
| <210> 1588 | | | | | | |
| <211> 1170 | | | | | | |
| <212> DNA | | | • | | | |
| <213> Homo | sapiens | | | | | |
| | - | | | | | |
| <400> 1588 | | | | | | |
| gctcctgggc | ctcacaaagt | gttgggatta | caggtatgag | ccacggcacc | tggcctggtc | 60 |
| tcttaactgg | ttccctaaga | cagctggaaa | tagagaatgt | catggagcat | tcctaaccat | 120 |
| gggctccagc | ctggctttca | ttctgtttct | cccctgaaac | aacattcctt | tagtaatatt | 180 |
| ccgaataaca | gcttcatcag | tctgtctacc | gaccactctt | caggcttcat | cttatatgac | 240 |
| ctcccaaact | gcactaaggg | ttgtattaga | gaaaagtgga | taaagttcgg | agtcaggctg | 300 |
| cttgagctta | aatgccagct | tcacttacca | gccacctgac | catgagtcag | ctgcttaacc | 360 |
| attctttgcc | acagtttcct | tgtctatgaa | aagggaaatg | gctcccacct | caaaaagttg | 420 |
| ttaacattaa | attcaatcat | gtattcaaag | tcctgagcag | aatgtctggc | catgactggg | 480 |
| acttaacaga | tgttagcatt | tattattagt | atctgtcagt | cttgaaatgt | tctcttccct | 540 |
| tggctttcat | gacattccac | actctcctgg | ttttctctta | cctctctggt | aatacctgtt | 600 |
| tgcttatcct | tctttgtcca | gctctgggat | gttaccattc | cttcaggcgt | gctgttttct | 660 |
| ccttaggcag | tcttacacac | actcatgact | tccttccatt | gtcctccaca | cactgatgac | 720 |
| cctaaaatca | gtatctccag | cctaaacctt | tccactgagt | tctagaccca | tatgttgtac | 780 |
| tatcaacctg | gcttgtccat | ttgaatgtct | tccaggcact | tcagactctc | ttctctagac | 840 |
| tttgctggac | tttcactctt | cccctaaaa | ctggctcctc | ttccactgaa | acatgtatgt | 900 |
| cattgagagg | tactactact | cacccagtge | ctaagccaga | aacctaggaa | tccttgatac | 960 |
| ctgttctctc | totttoottt | tatecaagee | catcagtttt | atctctaaat | tatattttgg | 1020 |
| taggtttact ccagaggttg | cagtgagggg | agatcacca | actoractor | ccaagctacc | accatctcac | 1080 |
| ctccatctca | aaaaaaaaaa | agattacget | actycactec | ageetggtga | cagagtaaga | 1140 |
| cccaccca | aaaaaaaaa | aaaaaaaaa | | | | 1170 |
| <210> 1589 | | | | | | |
| <211> 1150 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | • | | | | | |
| <400> 1589 | | | | | | |
| gaattcggca | cgagaagcag | ctcaacgtaa | tctacctacc | actggggaac | tagctaatga | 60 |
| ccctccacag | tgatgctgta | ttgaggactt | ggtgttgatc | tctaccacta | gtcagttggg | 120 |
| cactcagcgg | tggctctagc | caggtcagct | ttggtgagtg | gaagtccata | ttgctgagcc | 180 |
| atgcataacc | tccatccctg | tcaccatggc | tactttgttc | atgagcccac | tgtggaatga | 240 |
| cagcagtggc | kggagaaaga | gctgactagt | atcacagaat | gggctctcct | atttccttga | 300 |
| tcattaaaat | acctctctgc | taagatcacc | tgttggtgag | cattcacatg | ggacacaaat | 360 |
| | | | | 3 | | |

| atcttcacta taaaggc | ca gatagtaaat | atttcaggct | ttqtqqacta | catattotot | 420 |
|----------------------|---------------|------------|------------|------------|------|
| ctgttacata ttctcct | tt cttctctcc | ctctcccttc | tattttcctt | cttctttata | 480 |
| gccctttaaa aacataaa | aa ccattcttac | attgtgtgct | atagtttgct | gaccccagc | 540 |
| ttacatgtta aaaaatg | aa gattcattta | agtgaaaatt | gtattgggaa | ggaatccaca | 600 |
| tttccagata atgagggt | tg aggaaggcac | tgcatttatt | ttaattataa | attoggattt | 660 |
| aaatctaaga aaacmtga | at aaagcaccca | aaggtattat | aaaaacacac | acttatotat | 720 |
| atgtgtctat gtgtgtgt | gt gtgtgtgtaa | agatacacac | acatacaatt | actcaataaa | 780 |
| taattacaaa tcacctaa | ta ttttataagt | ttattaacca | aagttactgg | cacaaactca | 840 |
| gatgcctact aggacct | gc agataaaagg | gcatttttga | agtggttaag | tacacagtag | 900 |
| taactgaact gcttatat | gt cagtaaattc | aaacgttagc | agaatgactt | taccagactt | 960 |
| tgtgaggact gagtaaaa | ca toottccaaa | catatatoto | acceptaget | aatcagtttt | 1020 |
| tatgatcacc tgtaaaag | ca gaggettgtt | tctaacatct | atacttttaa | gaaattettt | 1020 |
| ttttctctta ccctggtc | at aagaaaaaag | aaaaaaaaa | aaaaaaaaaa | ctcgagggg | 1140 |
| ggcccggtac | | | | occgagggg | 1150 |
| | | | | | 1130 |
| <210> 1590 | | | | | |
| <211> 2612 | | | | | |
| <212> DNA | | | | | |
| <213> Homo sapiens | | | | | |
| | | | | | |
| <400> 1590 | | | | | |
| gggcgatggt ttctggtg | gg aaggcccagg | ccgagggcga | tggtttctgc | cgggacggcc | 60 |
| gaggccgagg gcggtggt | tt ctgccgggac | ggcccagacg | gaagggatgc | ggcttgggag | 120 |
| gtggggcctg aggatgtg | gc catggcgcgt | gctcttcctg | gctggtgcct | ctcctagtca | 180 |
| gcttcaggag atgggctg | ta gatgtacctc | cactgcccag | agctctgcag | gggaaggcag | 240 |
| taaaacctcc ctgcatcc | tg acccacgtgt | ttgtagatcc | tttcagctat | tggcgccctg | 300 |
| gaggatggga cgggaagg | ag aacgtggccg | gtgggtggag | gatagcactg | gtgcctggcc | 360 |
| ccatgatggc tgcaatgc | gg ccacattctc | agtgggtcat | gtctgaatgc | gagagcagct | 420 |
| gtgttctgcg agtggtga | aa caattgcctg | ttgcattcta | tttataggca | gaggtaacta | 480 |
| aaaacctcag tgctgaga | gg ggcatcatat | agatcctgca | gttatgagct | ggttcacttg | 540 |
| gagttgtttt ggttgcag | gt gacagaaagc | acgactcaag | gtagcatcaa | ccaaacaggg | 600 |
| gaggtgggag cactcacc | ag gcagagaagt | ccctgccccc | actgcttgca | gcccaacagt | 660 |
| gtggccccat atgggtct | cc cctggactaa | tggctgcggc | cttggaagtg | gtgtgctctg | 720 |
| ggccaggcct ggatcact | tg tccatcctga | gttgggaatg | ggggcagccc | ccagagacag | 780 |
| actcaggaaa gggggagt | gc aaggatgtcc | cccagatgcc | ctgtgctgcc | caggggacag | 840 |
| ctcactggca gtgggacg | aa accgctgtct | gtccagggct | ctcttcctag | aaggtcttag | 900 |
| gaactcccaa atgggtgc | tg gctggggttg | cccggcccgg | tgctctcaag | gagagctgaa | 960 |
| gctagttatt gggtgcag | at gctggctctg | acccctgccc | cttcctcccg | ggctcagctt | 1020 |
| ccccatctgt catggagt | aa taacaaccca | gccttctggt | ccactgagga | atgtgtgtgc | 1080 |
| ctgtgtgttt gacgctct | ca gaacaggcct | gcagcgctgt | gagccttgga | agggggcctc | 1140 |
| acagetgetg cegecace | t ggaggcccag | gatgggactg | agaaggggaa | gggagaggtc | 1200 |
| ayayeeacag etgttggg | ca gggacctgct | gtaggaagag | aaggccaggg | aggcgctggt | 1260 |
| ggtggcctca ggctatgc | ig gtgatgccca | ttgtttccag | ggccatccca | gttggaggtt | 1320 |
| cctgtttcta gaggaggt | c ccttgtgacc | ccctcatttc | cacacccgag | caatgctgag | 1380 |
| ggctgtgggg cccccag | g gcttgagtgt | ggtttatggc | acagcaggga | ctgatcacag | 1440 |
| tggcaccggg tgtcagtgg | c cagtggtcag | tggccaggaa | ccctcaggac | cctcctcctt | 1500 |
| gtgtgggtgg catttacco | a cccacaggtc | acgctcagga | cccgcatctc | attccgatcc | 1560 |
| tccttgtgtg ggtggtac | t acccacccac | aggtcacgct | caggacccca | catctcattc | 1620 |
| tgaaggccgg gcacaggc | g tigittete | tccaacttcg | gtttccccat | ccccactctt | 1680 |
| agggcacaaa tgcaggtg | a getteeceat | gcccactctt | taggcacaaa | tgcaggtgta | 1740 |
| gcttccccat ccccactc | t agggcacaaa | tgcaggtgca | gcttccccat | ccccactctt | 1800 |
| agggcacaaa tgcaggtg | t to manage | cccactctt | taggcacaaa | tgcaggtgca | 1860 |
| gcttccccat ccccactct | L Laygeacaaa | rgcaggtgca | gcttccccat | cccactctt | 1920 |
| aaggcacaaa tgcaggtgd | a yellececat | tasat | aaggcacaaa | tgcaggtgca | 1980 |
| gcttccccat ccccactct | c cayycacaaa | Lycagtggca | gcttccccat | ccccactct | 2040 |
| tagggcacaa atgcaggtg | c ttaggger | cccccactc | ttaggcacaa | atgccaggtg | 2100 |
| tttagggaga aatggagg | a atatasaa | aatgcaggtg | cagcttcccc | atccccactc | 2160 |
| tttaggcaca aatgcaggt | y cigigagege | tttagaatcc | tctgctgcag | gtgactttgc | 2220 |
| ttcagcgaac cacagaatg | a tttatatatt | taagdattt | gttatttcag | ggaaaatcaa | 2280 |
| ggttaaagat gtcttcaga | t daddcddddii | ratogogo . | acygtggctc | acacctgtag | 2340 |
| tcccagcact tttggaggc | - 2~22~3366 | guccycyayy | ccgggggatC | yayaccatcc | 2400 |
| | | | | | |

```
tggctgacac ggtgaaactc cgtctgtacc aaaaatacaa aaaaattggc cggatgtggt
                                                                    2460
ggcgggcgcc tgtagtccca gctactcggg aggctgaggc aggagaatgg cgtgcacccg
                                                                    2520
tgaggcggag cttgcagtga gccgagatgg tgctgctgca ctccagcctg ggctacagag
                                                                    2580
caagactctg tctcaaaaaa aaaaaaaaa aa
                                                                    2612
<210> 1591
<211> 1485
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1365)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1402)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1423)
<223> n equals a,t,g, or c
<400> 1591
aggttttgaa caagtaatat gttcatgtgg tttaaaatgc taaagttaca acattataca
                                                                      60
tagttaaaaa aaatctgtct tctaagtaga tactccattg tcctctgtag ggagaattgg
                                                                     120
agttactagt ttcttggctg tcattctatg catttataaa cagttgcatt tttttcccct
                                                                     180
tatttttact agcatattat gtatactagt ttatacttcg actttcccat gtaatataga
                                                                     240
atcttgagag attattctat actgtaacat aaaagagctt ccttgaaaaa atattcttaa
                                                                     300
aatagaatat tccataaaat attctataaa atactgcttt gaatatttgc accactatct
                                                                     360
ttttttcttt tttttttga gatggattct cgctctactg cccaggctgg agtacagtgg
                                                                     420
caccateteg geteactgea acceecacet eccaaateta tgatetett catatttget
                                                                     480
tacttttcta ttagattgtt gatccttcct cttactgatt tatagaagcc ctttgttagg
                                                                     540
tgcattagct cattgaggta tgagttgaat gtatccagat ttataaattt taaaagaggg
                                                                     600
atttacaaaa gtcctctaag tcttgcttta agttaatggt tagagctgtg aaaacctaat
                                                                     660
taagtcattt cacacaatgt tctcccatga gaaaatccaa agtttgttta aaattcaaaa
                                                                     720
tttaccattt taatcatttt aagtgtatag ctaagtggca ttaaatacat tcacaatatt
                                                                     780
gtataaccac caccactttc tatttccaga agtttttcat cacccaaact acaactctat
                                                                     840
taaagtaata actactcatt teetteeegt eeteecagee eetggtaace tgtactetge
                                                                     900
tttctgtctc tatgaatttc cctactctag atacttcata taagtgggat tacacaatgt
                                                                     960
ttttcctttt ttgtctggct tatttcactt agcataatgt tttcaaggct catccatatt
                                                                    1020
gtaagcatac ggaggaataa tctattggaa tatttttata tagcatatta tttacatata
                                                                    1080
aattccatat ggaggaataa tattcaattt tttgtgtaca ccacatcttq qttatccatt
                                                                    1140
catctggtga aaaataattt gggcctaggc acagtagctc acgtctctaa tcccagcaca
                                                                    1200
ttgggaaget gaggtgggtg gattgeetga geecagaaga teaggaeeag eetgggeaae
                                                                    1260
atggcgagac cccatgtcta taaaaaattt aaaaattagt tgggcgtggt ggtgtgcgcc
                                                                    1320
tgtagttcta gctactcagg aggctgagat gagaggatca cctgngctta ggagatggag
                                                                    1380
gttgcagtga gctgagattg cnccatgcac tccaacccgg gcnacagaga ccctgtctca
                                                                    1440
1485
<210> 1592
<211> 1566
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1013)
<223> n equals a,t,g, or c
```

```
<220>
<221> SITE
<222> (1020)
<223> n equals a,t,g, or c
<400> 1592
gaattcggca cgaggatttc cctgggccat taagaaaagt accttttaat gtgctcaaga
                                                                      60
attcagggtt tagaaagatt tccatccaga ttggctcctt aaagaaaaaa gatgcggtgc
                                                                     120
ataatttatt ttactttcag ttatctgcta acgcagctat gcaaaatgac tcatttattg
                                                                     180
gggagtgggt ggtggcatta ggtaaagtct taccatattg tctattttga ctgtttcatt
                                                                     240
cttaatagaa gtctacacat tgcctgcaat tgaggtataa ttttctttaa agggagtgtt
                                                                     300
gtttcagata aggtagctgc gacctaagaa aggaataatt ctatatgatt ttaagtcttt
                                                                     360
agggratgga agcactgtct tawtaattgg aaagtcccaa ctgatagcac tgacatawtc
                                                                     420
atgtgctttc tttgcctgcc tgctcatctg cagccctgat cacagaagga agggagaagt
                                                                     480
agataagaaa tagtagttat gaggatgaaa cgtgcacata taggagccct ctcacgttag
                                                                     540
gcttggtttg gtgtctggag gcacgtgatg agaacagcag tggatctgtg ggctcatgtt
                                                                     600
tccttactcc tgctctatta ggactccagt ctgaagggat gatctagtac caaccaggag
                                                                     660
atgtttagaa gamcgasatg tttcctgaag tattctgagc tgtctcargt tgattacgtg
                                                                     720
ctttcttatc ttagatggct cctggagagc tgtctgggta atatgctctc ccactttggt
                                                                     780
aattttggat tttttgcara tgctttttgt aaaagaacac ctatgagtga ggcctatggt
                                                                     840
tttggggttt gcagtgccca accagtcaag ctggtctttg ccttttttgt ggttggatat
                                                                     900
ggaaagagtg gtcagtagat ttcccagtgc tgtactcatg ccattcagct catagtcaca
                                                                     960
taggtttcca tatttgctaa taaaaataag aaaattccgg aaaaggggag tangttggan
                                                                    1020
ttgtcaagtt gaactgtgaa tggtgtggat gagatattct ggggagagaa tggacagacc
                                                                    1080
aggtttggct tagctactag ttgagtgtcc cttctagctc tctgggattt ctttctaatc
                                                                    1140
tgtaaaatca cctattttgt tgaagtargc ttgcctgtcc tttcaattct tggacatttc
                                                                    1200
agaacataag ctatgtgttt ttctggaaaa aaaaaaagga tatttgttag aattagaatt
                                                                    1260
tacttgttat gaatctaacc ttcacacacc aaacccccag ctaagacagt aagttgcata
                                                                    1320
tataattgta ataaatacta tgtaagtctg aaaggggaaa gagaacttga gtttgcgact
                                                                    1380
tttcttataa tcttgaagaa gtaattccca gacttcagag tgtgtaagaa atcactagaa
                                                                    1440
tgctagttta aaaaggcatg gattcctata ccccagttac acagttctta tggcctggga
                                                                    1500
1560
actcga
                                                                    1566
<210> 1593
<211> 1638
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1578)
<223> n equals a,t,g, or c
<400> 1593
tttttttttc tctcctctct aaacatttat gatgtatgat acagtgtgtc ctggctggat
                                                                      60
ttttcctgtt agcaggcaga aagaatccct cctggattcc agaataataa atacagtcat
                                                                     120
gtgctgctta atgacgtttt cgtcaacaat gggccacata tatgatggtc caaagcacta
                                                                     180
tactgtacat catctcattg gaaaacctta tgaaatagga gggcaactat catcataatc
                                                                     240
atcttccttc cccccaccac caacttcagg gagtgaggtc ctgggaaatg aagggacact
                                                                     300
atccatgtgc ttggatgtct ctatcctggt tccgtactct ttccgctatg atatactgcc
                                                                     360
ttctatatat agataaaagt tcaattytct ttttcacaaa tgagaggaga atatgattga
                                                                     420
gttttagtaa aattgatatc cagtaatact ataatgtatt tagatcaagt tagcacctaa
                                                                     480
atagcaaacc tgcttgctct attaagctag tgatttttca ctataggtgc taacaaccat
                                                                     540
tacgtagcat ctattctcta aaattgttgc tatcggtcta gcagaggagc agtgcactaa
                                                                     600
tgtgggtgca gatattatag aaaccagaat acatgggtga tgactgttcc actcaccatc
                                                                     660
ttctcatatc tctggggatc tcattgtgga gtaaggggca taatgttagt atacctttta
                                                                    720
gagatcaaag gggcaagtca gcatcagctg aaagttgaat cacctcatta aagaatttta
                                                                    780
tatccctttc agggggttga tttggaaagg aaaacagaca taagatttga atgtatcagt
                                                                     840
gtggctactt gtgaacatac tgcattcaac taatggatag aaatttgaat aaaatatttc
                                                                    900
```

```
agaagaggtt tttcttgtgt gtgtgtttt ttaaaaagaa ttttgtaatg cacttcttcc
                                                                   960
atgcatatct tatctactct tcagggaata cagaagcaga tttacaaatg aagagacagt
                                                                  1020
gtcattctgc ttgagggtaa tggtgggtgt cataatactc tatgaccacg tacatccagt
                                                                  1080
gggagcattt gctaaaactt ccaaaattga tgtaagttat tgttttatat aaataatttc
                                                                  1140
1200
actctcacaa aactcagatt tatagtttgt gaaatggtgg actttcatct cctctgtccc
                                                                  1260
tgtgctgttt ttcttgtggc ctgtattcag gtggaataga atgatcaaag gatgactata
                                                                  1320
ttgtctagtg agtacctcct ggaaggcttc tactacgtat ttggcaatat aaatagataa
                                                                  1380
ttagatataa ggaattttga gtcatatcct ttaattcctt tggccaaagg ccatttcaaa
                                                                  1440
taaaatgttt atttcagaat gcatataaaa agtcagtagt gctgctgggc gtgctggctc
                                                                  1500
atgcctgtag cccaagcact ttggcaggct gaagcaggag gatcacttga gcccaggagt
                                                                  1560
1620
ctcgagggg ggcccgaa
                                                                  1638
<210> 1594
<211> 935
<212> DNA
<213> Homo sapiens
<400> 1594
gtggtggtgg ctgtaggacc tggtgaataa taaactgaaa accactgaat cgtaccctt
                                                                    60
aaaaacacac aaagcaaatt gacaaattat tgggaggcaa cataagagaa tggggtgtga
                                                                   120
actttggatc agtgcggcct ggatatcagc tgtgtggtgt tcaaatagat tgcataacct
                                                                   180
cgttgagtct cagtcttccc atctgtgaag tagggatcat tcctacttcg tagggttggc
                                                                   240
atgagactca gtgagatgaa gttggtgggt cacttggctg gggcaggtgt cacggagcgg
                                                                   300
gacctgtgat tgttcagcca cctactctgt gcccagtgct gtgttggtga ccaggtatgt
                                                                   360
atgaagtcag taagccacag tcctgagtta tggtgcagac cccacatgca cccagagtca
                                                                   420
gcttggcaag accccttgac accacgtgcg tggagggtgc aggtcggaga gctcacctcc
                                                                   480
atggattccg tagagetttg aggegtatee acaaagtgte caggagaggt ggegtegeet
                                                                   540
ccacttgata gaggagaaag cagagatgga ggcagccaga agcatggtgc agtggtgggg
                                                                   600
tttggtcatt aatttgataa tcacatggaa tacaagctaa tgtttattga gtacttactg
                                                                   660
cctgcccgct actgtaacta agtgctttac tcctgttatc tcatttaatt ctcaaagcag
                                                                   720
ccctgtggca ctgaggtggc tggagatgga gggatgtgtg gctgccatgt gtttgccagg
                                                                   780
aagcagcagg atgggagtga gggcacagac agacacacat gccaggactt gtttgcacga
                                                                   840
agctgaggaa tgggtgccca tcattcatta tactcatctc tctgttttat gtatattcaa
                                                                   900
aaaaaaaaa aaaaaaaaa aaaaaaaaa aaaaa
                                                                   935
<210> 1595
<211> 628
<212> DNA
<213> Homo sapiens
<400> 1595
ggcacgagcg ggaggctgag gcaggagaat cgcttaaacc tqqqaqqcqq aqqttqcaqt
                                                                    60
gagetgatga gategtgtge cattgeacte cageetgggt gacagageaa gactecatet
                                                                   120
caaaaaaaga aaagaaaaat tttatatatg taatttaact tgcaaatgac aagtttttaa
                                                                   180
tattttctta tttttgcttg tgtttgttta tgcctttaat tccttgacca gaatgactat
                                                                   240
agctaaatta actttggtag tgtattttca ttcatttact atctcgtcat ttccatgggt
                                                                   300
caggagtctg ggcacacctt agctgggtcc tctgttgaga gtctcaaaaa ggctaaccag
                                                                   360
aaggtatcag ccaaattgta tttatttcta gaggttggag tgctcttcca agttcatgga
                                                                   420
gttgttggca gaattcagtt ccttgcaact gtgggactga ggtagccatt ttcttgaggg
                                                                   480
ctaatggcca gaaattgctc tcagctcctt agaggctatt cacagttcct tgccacgtgg
                                                                   540
ccttctcaca gaccctctca gagcacagca gcttttacat cttcaagatc atcagcagga
                                                                   600
gatetgtete etgetgette tetettae
                                                                   628
<210> 1596
<211> 410
<212> DNA
<213> Homo sapiens
<400> 1596
```

```
gaatteggea egagatgeet tggtatttet eecetteeet gttgtggtet etgttteagt
                                                                        60
ggtcggactc agaagcaggt tctcgactat gttaaagaag gaggacataa gaaggtgcag
                                                                       120
tttgaaaggt aagagaagct tcaatgctac ttccagtctg agaaggctca gactcgccag
                                                                       180
gtaacagttt gttgctgcta aatatttctt tacccagact tcagacttga tgtcccttqa
                                                                       240
gttgtaaatg atagtctcag tcatcctcag caagtccagt gttagagagg aaggttttag
                                                                       300
agcccagggg cacacctcg agggggggcc cggtacccaa ttcgccctat agtgagtcgt
                                                                       360
attacaattc actggccgtc gttttacaac gtcgtgactg ggaaaaccct
                                                                       410
<210> 1597
<211> 1409
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (478)
<223> n equals a,t,g, or c
<400> 1597
gtcaggatat gagtcttcct atgtcattct ttattctttc acatttatca tcttttatga
                                                                        60
tatgtacata tggcaaagat tattcccact ttacagatga aggagcattt acttgaaagg
                                                                      120
atgcagaata aaaacagata taattcatat actaaaagac atttcataga caatggcaca
                                                                      180
atgatttctc caaaccgccc tacattatat gatttcttat cttcattgtg ttgctgatta
                                                                      240
aacagtttaa gtgatttatc cagttcctct taggaagtgg cagaatagaa agctatgatg
                                                                      300
gttaatttta tgcgtcactt gactgagcca tggggtgccc aacatttagt caaacattat
                                                                      360
tctgtgtgta tctgtgarga tccttctgga tgaaatcaac gtttgaattg ttagactgaa
                                                                      420
taaagcagat ttctctcccc aatgtatata ggctcatcct atttgttaaa ggtctganat
                                                                      480
gttgactctc tmtcttagtc cgttctatgt tgctgtagag agatatgtga gactgggtaa
                                                                      540
tttataagga aaggtggttt atttggctca cagttctgca ggctgtgcaa gaggcatggc
                                                                      600
acaagcatet gettetggaa agggaegtea ggaggettee aateatggea geaggggaaa
                                                                      660
gggagaaggg caaggtatgt cacatggcaa gagmggaaga aagagggaga gaagaagaag
                                                                      720
gtgccagget etttttamee atcagttate atgggaaetw atagagtgag gaetcageae
                                                                      780
aaagtcatgc ataaaggatc tgacccgtga tccaaacagt ttccaccagg ccccacctcc
                                                                      840
agtgctgggg atcaaaattc aacatgagat ttgaagagga caaatatcca aactatatca
                                                                      900
ccctcccata agtaagaagg cccctgtgag tgcagtgtgt tttagtttaa gctactagga
                                                                      960
agggtgaggc aggaggatta cttgttgagc ctagaggttc aagtcctgcc taggcagcac
                                                                     1020
agcaagaccc cacctctaaa aaaatggagc ccctcctgtc atagtacacc agatatttcc
                                                                     1080
tgtcttctaa cttgaactga aacatccata ttttaaaagt ctcaagttta caaatcttgg
                                                                     1140
gactttttag cctccatatc acacaagcca atttcttata ataataataa tgatgataca
                                                                     1200
atatatagga tatatattgt ttctgtttca ctaaagaacc ctcatacaga agccaagcag
                                                                     1260
catcetetet aatgteaaaa teagtgettt ttetgtgaca tteatgetee tetacgaatg
                                                                     1320
aaaacctggc tcacatttta tgctaatact aaggagtaaa aaaacatcca ttacttattq
                                                                     1380
tatacaataa aagcttcaca acaattgag
                                                                     1409
<210> 1598
<211> 1300
<212> DNA
<213> Homo sapiens
<400> 1598
gcacagaagt ttgaaaagta accctgggaa gaaatgaatg aggaggaaag aaaatgtaca
                                                                       60
aatgagaagg acccagtgga tttgccatac aaagtacctc tgagtaaaac cactaaatta
                                                                      120
ctcttggggt tgtggggaat tkagatgcca ctggccattt ttgccttagt tgaccttttt
                                                                      180
tgggtcagta gtttctcaaa catcaatgtg cctaaggatc accttgtgaa gtgtttaaga
                                                                      240
ttcagagtcc tgagccaccc tgagagatct ggattaaaca gatcaaggaa tctgcatttt
                                                                      300
taactagcac tgccagtgag tttgtggact acactgagaa aatggctcta caatgttaaa
                                                                      360
agcacacata ttttttaaaa atgacaaatg ccatttcaaa cagacttaca acccatttat
                                                                      420
ataggettte eetgeaaagt acacagtttt gaettataat caageetaca ggaatgtaac
                                                                      480
tagcaaggga gcaaaggaga gcaggagatt agaagaagaa tcaataaatg gctcaaatat
                                                                      540
gtgaaataac cttgttcatc caaaatacag gatggtggtg ttctaactgt catggtaggg
                                                                      600
ttcaattgcc tcagttcaat tttaggaaaa ctggcaatca tttcttttgc aggggacaca
                                                                      660
```

```
atttctgaag aacccagtcc tttaaaaaaa aaaaagtgag ctatcacccc actattgaga
                                                                      720
gagcagctac tagctcagta ttggtgtacc cagatgggca gcctagcagc caaggaaaca
                                                                      780
gaggtgggtc tatgtactgt cccatcctgt caccctttat cagtgagacc ttgggcagag
                                                                      840
cctggctcat ttcctggcat acgataggct ttcctcatct gcacaatgaa tatgcatcca
                                                                      900
catgttaaac caccacttcg caaattataa ggttgaaatg agataataaa gttgtgtcct
                                                                      960
tagcatacag actggaccgt tgagaagtgc agggggaaaa aatcagaaag atctgatttt
                                                                     1020
agatttttag tcaaactaag caagaggact taacatttca gcaactcagt ttgcaccatg
                                                                     1080
aatttctcca ctcaatttat gagaattact attcccttga agtgatttaa ggaatcatta
                                                                     1140
agatttggca gtggaaggtg ggactcattt catataccat tacccttaag ccgagactac
                                                                     1200
tataagaagt tggtacatgg ccaggcacgg tgctcacgcc tgtaatccca gcactttggg
                                                                     1260
aggccaaggt gggtggatca cttgagttca ggagctcgag
                                                                     1300
<210> 1599
<211> 397
<212> DNA
<213> Homo sapiens
<400> 1599
ctcgtgccga ttcggcagag gagatatcat ctcacaccag ttagaatggc gatcattaaa
                                                                       60
aagtcaggaa acaacaggtg ctggagagga tgtggagaaa taggaactgc aggttcactt
                                                                      120
tcatwttagg attattgagg tataatgtac atgcaacacg tattactatg tctaatgtac
                                                                      180
                                                                      240
atttcaatga gttttaacaa atttatattg tcatgtaata atcaccatga tcaatttaca
                                                                      300
gaacgtttcc acttgctgta gtttggatgt ttgtccccca aagtgcacgt tgaaatttga
tccccaatgt tggaggtggg gcttaatggg aggtgttggg gttattggag tggatccctc
                                                                      360
aagaatgcct tggtgccatc ctcgaggggg gggcccg
                                                                      397
<210> 1600
<211> 964
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (883)
<223> n equals a,t,g, or c
<400> 1600
ggctgaatga gttggctcag gattatcttg tccatgttga aaactgcatt tgaacccagg
                                                                       60
tctgtctgac tccaaaaacc aaatggtttc ctcctcatca tttcagaaac tagcaaaatg
                                                                      120
cttttatgta caccatttga ttttagaatc ctgtacattt tctaaatgag ggcagtgaga
                                                                      180
ctcagaaaaa tagtatgtcc aaagtgacta aggtagtaga gagaagattc aaaaccctat
                                                                      240
cccaggcctt ctgactccca ttccaatgct cttccagcta catcacagat cttttgagca
                                                                      300
cccctgaaa tcgcacccaa actgatgttc acgtggcaga tacctcacca ccctctcctc
                                                                      360
acctcacgcc ttaaattctc atcttcaggc ccctctgtct caggtgacac tcatgctggt
                                                                      420
aaaatgtcct gtgttttctg ccggaagtag ccagcccaga caggtgcagg agaggtctgc
                                                                      480
tctagaggga tatattgcac agccttgtcc ctgcctcccc tatttcaccg ctgatttctg
                                                                      540
atgggacccc cagatgagta tcatcccct cctggccatt tacaacctgc aaagcaactt
                                                                      600
gagttcctcc agagggactg gcagctctgt caagaccata tacgattttc ccatgaaaag
                                                                      660
tacctttgga agaagatttc ttcatcagtt tccaccatga acacagatgg acacgtttct
                                                                      720
ccagaatctt ctctgctgtc atttgctgtc ctgcaaagaa cctgggattg tccttcgctg
                                                                      780
ggacagagag ggtcaggccc aggctggaag ttctcggttc cactggtgct ctcgggggga
                                                                      840
aaaatgtggt atttttcctt ttgtcttttc tgcttttgtt ttncgctttg ctccaagctg
                                                                      900
atgattctct cagcttctgt cttcatgatg ccaacactac caaatgaaaa aaaaaaact
                                                                      960
cgag
                                                                      964
<210> 1601
<211> 1004
<212> DNA
<213> Homo sapiens
<400> 1601
```

| | | ataggcaatg | | | | 60 |
|--------------------------|------------|--------------------------|------------|------------|------------|------------|
| | | aaataataat | | | | 120 180 |
| _ | | tgggtagcat atggtttgtc | | | | 240 |
| | | tcatgtctgt | | | | 300 |
| | | accctcatgg | _ | | | 360 |
| | | tctctgttca | | | | 420 |
| acgaatcata | tggccaagcc | caaaatcatg | tggtagggaa | gtaaatacca | tccacaattg | 480 |
| | | cttgctgggc | | | | 540 |
| | | agtgctgtga | | | | 600 |
| | | agatettget | | | | 660 720 |
| | | ttcactgcta cagcaggtcg | | | | 780 |
| | | tttgaatagt | | | | 840 |
| | | cagggtacca | | | | 900 |
| | | tgagaaaaag | | | | 960 |
| tatgttttta | aaataaggcc | atacacaaaa | aaaaaaaaa | aaaa | | 1004 |
| -210- 1602 | | | | | | |
| <210> 1602 <211> 1110 | | | | | | |
| <211> 1110 <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1602 | | | | | . | 60 |
| | | catgttgctc ttttaaaggc | | | | 60 120 |
| | | gaactagtga | | | | 180 |
| | | atgttacaac | | | | 240 |
| | | gatattggtc | | | | 300 |
| aatctgtgtt | ttgatcccta | tgatgtaaac | aatattagtg | gatggattcc | aggattcttc | 360 |
| | | gtttacagaa | | | | 420 |
| | | ggctgtcccg | | | | 480 |
| | | tttgacttgt | | | | 540 600 |
| | | tagaaaaaaa agaacaatca | | | | 660 |
| | | agagtttaat | | | | 720 |
| | | tgtgattgat | | | | 780 |
| actgaacatt | ttataactgg | ttagacatgg | tatggaacag | agaaatccac | actgaaaaag | 840 |
| | | agtaagttta | | | | 900 |
| | | ttcagctggg | | | | 960 |
| | | tgctgtatcc | | | | 1020 |
| | attttgattg | atcagtttaa | acatagitti | getattgtta | ayayaccaaa | 1080 |
| J | | 33 | | | | |
| <210> 1603 | | | | | | |
| <211> 639 | | | | | | |
| <212> DNA <213> Homo | anniona | | | | | |
| <213> HOIIIO | saprens | | | | | |
| <400> 1603 | | | | | | |
| | | atttcctgat | | | | 60 |
| | | ggtgttgaaa | | | | 120 |
| | | acacatgcac | | | | 180 |
| | | tgaatgtgca | | | | 240 300 |
| | | cggtagagta cccaggtaga | | | | 360 |
| | | ttcggaagct | | | | 420 |
| | | ctgtgttcat | - | | | 480 |
| | | aggtaaatgc | | | | 540 |
| | | gggtgtggcg | | ataatcccag | cactttggga | 600 |
| ggccaaggtg | ggcaaatcac | ctgaggtcag | gagctcgag | | | 639 |

```
<210> 1604
<211> 1197
<212> DNA
<213> Homo sapiens
<400> 1604
gagaaacttt cccttcctga ttctgtgcaa gcacggctgt gagcgaacag cctccgtatt
                                                                        60
tcaacaaaca tcctacttgt atggtcttag gatctgtttc cagacagtca cctcggggct
                                                                       120
cactctagtc ctgaaagcat cttcccatcc ctttgtgatg ttcagtctgt tgcgggcatt
                                                                       180
cccctctgac aggtgtcctt gccctgctgc ttctacaggg tggcaaagag caagggcttc
                                                                       240
                                                                       300
ageteceaag eteagetgea gggeaettag geeeegagtg tgteeecagt gaeeetgaet
tgagggacac actgggcgct gcagccacaa ggcactgctc ctgtagtcat ggtgggcagc
                                                                       360
cagcattgcc ccaggccaca gtgctggtgt cccaggctcc tcagggacct gaggacaggg
                                                                       420
ccaagtgtgc cagtccacac caggctggcc ctgccagtcc acaccaggct ggccctgcca
                                                                       480
gtcaacaggt gcacatacag gtcctgaaac cacctcaggt caaataaggg atttgggggc
                                                                       540
acacaggttg cattctgcct cttgggaaga tgatgcaagg gaatgacagg caggctggtt
                                                                       600
ccaacgcatt gccaagcgcc agctgagcgg gctgggagca ggcacattcc ggtaaccagg
                                                                       660
acagaagtgg gctagtgata cctggtcatg tcttttccca agacaaaacc aggaagactg
                                                                      720
gcccagcccg tttggtgtgt tacaggctga actgtgcccc tccccaaatg tgtatggtga
                                                                      780
aggcctaacc tccagtacct ccaaatgtga cctcacttgg agagggggtg tttagagagg
                                                                      840
                                                                      900
taatcaggtt aaaatgaagt cattagggtg ggtcataacc ccatacaact gctgcctga
                                                                      960
tatgaagggg aaatctggag acagctgtgt agaaaacacc atctgaacag gaagacagcc
atctacaggt caaggggaga ggtccgggac cgatcctccc tcccagccca aagcaggaac
                                                                      1020
tgaacctgac acctggattg tagacttctg gcctccagga cagagacaat atgtgctgct
                                                                     1080
gttgaagctg cccaggcagg gttcctctgt gaggcagccc caggggactc agagtgtgcc
                                                                     1140
ccaggagtcc tgtgggaatt gccccaccct tcctggcaca ctcctgaatg ttctcga
                                                                     1197
<210> 1605
<211> 421
<212> DNA
<213> Homo sapiens
<400> 1605
ggcacgtagg aactcctgac ctcaggtaat ccgcccgcct cagcctccca aagtgctggg
                                                                       60
attacaggtg tgagccacca tgcccagcct aatctttatt atttccttct ttctgctagc
                                                                      120
tgtggattta gtttgtcctt ctttttcttg ttccttaagg tgtgcaggta acttgtttct
                                                                      180
ttgagatett tettatttta atgtaageat ttecagetgt aagtteette ttageaetge
                                                                      240
ttttatagca gcccatattg tgtttttgtt tttattggcc atgttgtgtt tttgtttgt
                                                                      300
tttgttttgt tttttaagac ggagtctcgc tctttcaccc aggccggact gcagtggcgc
                                                                      360
tatctcggct cactgcaagc tccgccaccc gggttcacac cattctcttg cctcagcctc
                                                                      420
                                                                      421
<210> 1606
<211> 1112
<212> DNA
<213> Homo sapiens
<400> 1606
ggcacgaggc tccacccggg ctgtttttat gacagctggc aaaacacgct aaggcacatt
                                                                       60
gaggactcag tgaggcaggt tcctgggcct ctgttaggct aagtttgaag ttgttccatc
                                                                      120
actgcctccc tctgccttct ttgccatttc catccatgat agcactaccc taactagtga
                                                                      180
tgagaagcag tetttggagt teetettete teetgteeet catggetaat tteeetgete
                                                                      240
agacttctgc ctctggtctc tttccttctg tgcacactga cttttttccc tctcctgtgc
                                                                      300
cgagctggag ggtaggaccc tctgctgcag cactgggtca ttctcaggat aaagtcttgg
                                                                      360
tctatctggg cgaacagatc acttccagct cgattcatac atagtgactc ttgcttgaat
                                                                      420
agcaagattt gcccaaatca gagctttaat cctatatata tggaacaaat aatcacttcc
                                                                      480
agatetecag ggaatetget caccetteat aagtttaeta gacagtttea gaattttgga
                                                                      540
attgaatgta agaattatga agggagctgc ccttcaacac gtggggatga tagattaaag
                                                                      600
gattatgaac ttagccagtg gaaggtgaag aagggtgtag tatagcggtt ggggtcacag
                                                                      660
ggctgcttct agatgccagg tggcagcccg tttcttgccc caggtggtag ggtagttgtg
                                                                      720
```

```
catctctgtt ttgtgtactt ttcaatgttt gttacctcac aatagaagag gtttaaaaga
                                                                780
ctattttgtg agagatcaag ttttaagtgc tttttgcccc catcattggc ttggctaggt
                                                                 840
900
tecetetete tegitetece tacetegete titettitta taggaatgga aaacaaaete
                                                                960
tattcctata agcttctcta tttctccttt ttttccaaaa tggaaaaaaa atagcaccag
                                                                1020
1080
tgacacacag gctcagtaca ggccgtccca tt
                                                                1112
<210> 1607
<211> 418
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (80)
<223> n equals a,t,g, or c
<400> 1607
tcggcacgag gttttatttc atgtattctt tgtctatgtg tatatgtgtg ttttatatga
                                                                 60
tttatattta tttatatttn atgtttactt acaaagttgg aagccagacc tggaaggact
                                                                120
tcccctacca tactaaggaa atttaattta attttgagta taaaggagag gtgctaaagg
                                                                180
                                                                240
attttgatca atgaagtgat agttctagta cccttacgga aagtggatta gaggaggcta
agaatgaaag cagggaagct ggatgtggtg gctcatgccc gtaatctcag cagctcggga
                                                                300
                                                                360
ggcggaggtg ggaggactgc ttgagttcag gagtttgagg ccagtctggg caacatagcg
418
<210> 1608
<211> 759
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (740)
<223> n equals a,t,g, or c
<400> 1608
ggaattcggc acgagtgtgt gccctrcatt ccaaggaatg ggccaagggt ttagatgacc
                                                                 60
ctcatagata aggaatgagg ctccaggctg gccactcctg gatttcttag cttggaactc
                                                                120
caaaaccagc actcttctta gaccacaggg ccagtctcag ggtatgttta agttattgct
                                                                180
gtcaggtgca tctgccatac actgtgtgtt tgtgtgtgtg tggtgcagtg tggtgcatgt
                                                                240
                                                                300
gcgtgtgtgt gtgtgtgatg tgctggagtt gctgtgtgtg ctgagtggga gagctcaact
                                                                360
tcattccttg ggtgacaagg gagaagatac tgatgggagg aggcgaatca caggtttgca
tttctgaaaa tttagtctgg agaaagacgg acaggctatg gggacatgga gcaaagctac
                                                                420
ttcagtggtc caacaaagag atgatgaggg tcagagtcag ggacgcagct gggggaaaaa
                                                                480
cgtgaaaaat actttgtaga taaaatggtc aggaccagat ccttgccttt aactattcag
                                                                540
tgcctgaata tatccttgat gacacagtag actgagaaag gaacaatctg cacaagaatg
                                                                600
agaaccttgg tsggggttg tggcttacgc ctgtaatcca gcamtttgga agccgargca
                                                                660
rgtggatcac aaggtcagaa aatcaagacc atccttgcca atatsgtgaa accgtgtctc
                                                                720
tactaaaaat acaataattn gcctggtgtg gtggtgggc
                                                                759
<210> 1609
<211> 1440
<212> DNA
<213> Homo sapiens
<400> 1609
ctacgtgccg tttagatgct gggccatatc actgagtgac tatagttgat tctcaaaaca
                                                                 60
tccatgtgcc aaatgattaa tgaagtatta atatttatca aatctactga tttatcaata
                                                                120
acttgattta aggaatatgc atctggaata tatcatatat gaatatgtac ttttttactc
                                                                180
```

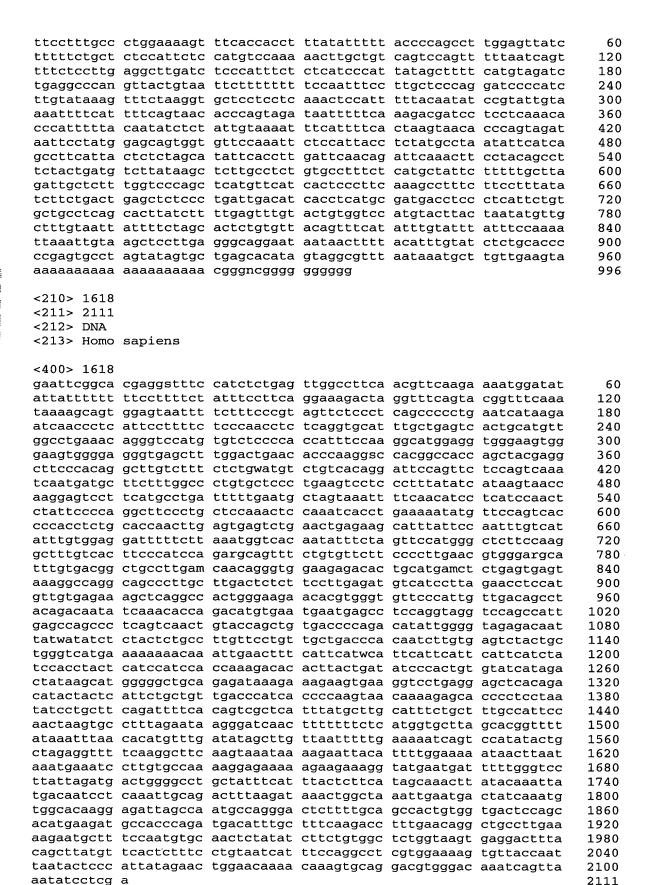
```
agcagtaact tactattctt tttctattta ctgctccttc ctactgggtc tctctctctt
                                                                      240
getetegete tetetegete tetgtetete tettettgag gtatttteee teetettet
                                                                      300
attcaaagct ttattttcag tctttgcttt cttacagtgt tgagttgttt ctctgtattc
                                                                      360
ctgtgtgcag attttgttat ttttatataa tttattcctt tattctttga agctgatcta
                                                                      420
eccetgtetg getecetttt attgtgacta gactetggge agetttttat tgacacagaa
                                                                      480
accatttttt tttccacaca cccactccca ctccatatca ttcgtacctt ttgaaggagg
                                                                      540
aatacacgtc tgaaatagta cttctcacac agcacagcct ggttcttgtc ttgagccaag
                                                                      600
tctgtaactt ggcttaagca gtttcctcat tagataaacc ctggctctta aatgaaaaac
                                                                      660
aagcaacttc attcaatccc caaaacagcc tgccgcagca cgaagagcag ccacacccca
                                                                      720
gtggtgccag ctttcttctc tttttttcc atgtctgccc tcttactagc ttgcaccagt
                                                                      780
tctgctgctg catgatgttg tctgtggagt gattttttta aaaagtatca gctgcttctt
                                                                      840
tecatectee tteateatgt attteettta ggagaetttg tteetetaat eegtteeaaa
                                                                      900
aagtaaaact attccaggct cattgcctca gggggagagt caggccggtg gaaaacaagg
                                                                      960
agggaatgga ggaaatggtc tcctcttaac acgttccatt ccagaagtcc aggccctttc
                                                                     1020
aggaaagcca cgcgttactg gcatgcatga aacatttggg cgacaaccta aattagagca
                                                                     1080
gtgcatcctc ctgccatatc cccttcccca gctgaggaga ggaggcagtt tctgaagaac
                                                                     1140
aaggaaggag agcatagatt ttcctaggct ttgaggaaga agacctgcat cctgtttggc
                                                                     1200
tggactaatt gtagggaggc ttgtgggatc taaggagaga aggaatggct gtctcccttg
                                                                     1260
ctgagaaggg tcacagggag gcagccagaa cccagtgggc agcaacgact tcatagtgtg
                                                                     1320
gctgaacagc gagggctcca gacagctctt ccagaggcct tggtgtcccc aaggccctga
                                                                     1380
tacagtagag agagccactg aaccaagggg gcccatgcag acaggcacat agggagcccc
                                                                     1440
<210> 1610
<211> 961
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (549)
<223> n equals a,t,g, or c
<400> 1610
gtcaatggct gtccatgtcg cccgtgcttc acctgaggag gctggcgagg tgtatcctct
                                                                       60
ttcacctgcc tcagttttcc tcatctgtga aacggcctca tggctttgga gcaaacagaa
                                                                      120
tgacagataa aagggacaaa tgacacaggg ctctccattt gtttaacgag tacttattga
                                                                      180
gaacctactg tgtgcagggc accaagccag gctgtggaga aaacagaagc gggtgacagg
                                                                      240
atgggagagg ttccagaagc cgctaggagg agaaggcagt taagctgtga cctggggcag
                                                                      300
gtggatgggc ctccctggga agatctgggt gtgggaagcg cctgccaggc agggggcacc
                                                                      360
tcaagtgcaa aggccctgar gtgtggacag gcgagacaag accaggacaa gccccgctgt
                                                                      420
tkccgttgtc tggaaaccaa ggtacaaaga gaggagggga cggagccaag gccacgcagc
                                                                      480
tggcagagkt ggagctggga tgttagggga ggaacagagg tcacgacctc tgcaagcttc
                                                                      540
atcccccanc cctcacccct cacccccagc cagaatcttc cagaggggtg gcctccctt
                                                                      600
cctgagccac cccagctgtt gcggaggctg ctgctgtcct ggttcccttg tttaattaca
                                                                      660
aacaacattt ttcgccctca cttaattatg caacagacgc ccgtggatct gccaccatct
                                                                      720
ggccccactt tctggcttga gacgacgagt cgcagtgact tcgagggctg agaggggagc
                                                                      780
aagcgggagg cacctcggcc aggagggcac cgagcttggc atggcctcag ctctgtgatg
                                                                      840
tacctggcca catctctgag tcctcatctg cagaattggg acaattgagg gtggcgcaag
                                                                      900
ggtctgtgag acaagagctg cttggcaaag aggagcctc agccctaaag ggggcctcga
                                                                      960
                                                                      961
<210> 1611
<211> 1174
<212> DNA
<213> Homo sapiens
<400> 1611
cgagaaggat tgttttttgt tgacttagca aaaacttctc cttacaaaac ctcttgagtg
                                                                       60
tgctgaattg tgaacaggaa attgacttgg ggtaagggga gagagggaac cagggcactc
                                                                      120
ttaaagagaa aaagacccct gggtcgataa ccaagtggtc ctgggactgg atctggctat
                                                                      180
tacatgcaca tcaacaatct tatgtacttg ctgattaaca aattatatat attctgcatg
```

240

```
300
tttacacaaa cagttcttgt gctagagagt ccacatcatt taaactttgt gggagaattt
tgcaaatgat ccaatcctag aggettgtac tetttettga gececaetca cettteettt
                                                                   360
420
ccattcccta cataaccctg agtttaaata caaacactca gtttaattgt ttcataaggc
                                                                   480
ttatttttgg ataaagatat ttcattttcc ctgcacatta aacttttatc acacttactg
                                                                   540
ataaaatgcc acagctcttg tattatcaac tacaagttca gtcttctact cagataccaa
                                                                   600
ttaatttctg tttctttgag tatcatggac tgaattttgt cccccactca ttcatgtgtt
                                                                   660
gaagacctaa cccacaatgt gtttatattt gacatagggc ctttaaggaa gtaattaatg
                                                                   720
ttaaataagg ccataagggt ggagccctaa tccaacagga ttagcattct tgtaagaaga
                                                                   780
ggaaggggca ccagagtttt caagcacaca agaaaggcca tgtgaggagc cacataacca
                                                                   840
                                                                   900
eggetgtetg cetggegteg tggcacacae etgtaateee ageaetttgg gaggeeaaag
taggcagatc gcttgaggta aggagttcaa gaccagcttg ggcaacatag cgagacccat
                                                                   960
ctctagaaaa aatacaaaaa ttagcagggt atggtggcag gcacctatag tcctagctgt
                                                                   1020
tgtaggggct gtggtgggag gatcgcttga acctgggagg cagaggttgt cagtgggctg
                                                                   1080
1140
aaaaaaaaa aaaaaaaaaa aaaaaaaact cgta
                                                                   1174
<210> 1612
<211> 1939
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1874)
<223> n equals a,t,g, or c
<400> 1612
agtaaaataa ataaaaatag aaaaaaaaac tcttcagtca aatatggtgg ccactagtgg
                                                                    60
ctattgagta cttgaaatgt agctagttag aactgcaatg tgctgtaagc ctaaaataca
                                                                   120
cacatttagt acaaaaaaga ttataaaata tcccaacttt tatattgatt ttgaaataat
                                                                   180
attttgagta tattgggcta aacaaaatgt agcattaaaa ttaatctcac ttctttcaat
                                                                   240
gtggctgaca aaaaagttta aattaaatgt gcggctcaca ttttgtttct attggacagc
                                                                   300
acaggtggag aaggtctctg aacataaaac accgawtaag tatattttcc actgggactg
                                                                   360
ggggtgggtg ctttggggga agtgcatagg tgctgggcag tgttaaaatc agggtgggcg
                                                                   420
taggtggcag tgaagggcag tctttgtgca gccagatggc aagtgagagc atgaatgcct
                                                                   480
gactgttgga aatgacaaaa taaatcatgg aatcctgaag tttcagggtg taaaatgctt
                                                                   540
tagaaatcat catctgaccc aataaatgat ggaaagaaat gccctggact cggaatctga
                                                                   600
atgttttggt tccagtctca gctccatcat ttattagata ggacgtcttg ggcaagtcag
                                                                   660
tetetttet tatatgteta atgggggaca taaaatetge ttgatettte etggaaggtt
                                                                   720
atttctatta ttttaactta tttgaaagcc cactcaaaat tccaaagtac tgcaacaata
                                                                   780
tgagatatta aatagatgtt gcctatttta caatcctggc tcagcccagt tctacagaca
                                                                   840
gttggtaatt ttcaaggtga gtaattaata cagagatact ttggcagtga aaatattatt
                                                                   900
agtgtgtttg tgcttatgtc tacacagaga agagagagga ggcaaagata aaacctgtag
                                                                   960
ctcccatttt cttcttatat atttttactt attttttctg tcacagttat aaccccttaa
                                                                   1020
gaaaaattta gatgagtact agaatctggc aaaattagtt aaatcagact gagatgaata
                                                                   1080
agatagaaca aaatgagctg tagaatgatg ttttggctga gccactcact ctgccagggt
                                                                   1140
cagcaccttc tttaattgac tcttttcaag gaaatgcagt acaggttgct ctctgttgtt
                                                                  1200
acctgtgtgt catgacccgc tgggccatta acccatttgt cttgaatagt caattctctg
                                                                  1260
gccccaggat tgtcaggagc caggaggagc tggggaacat ggctgagaca ttctcactcc
                                                                  1320
tgttccagcc tcaggaaaac ccactgagcc tgggtcaaat cttgggagta actgctgaca
                                                                  1380
atggtgattc ctgagccatc ctctctccat tgcttgtcct gggtgaggcc tcagggaggc
                                                                  1440
caacaatttc ctatgcctct ctattgctgt acacatctgg aactgaaatt cattgcatat
                                                                  1500
cccttcaccc ctgaatttaa ccctgagaag tgtgaaaaat tggttcaaac gtcctcatca
                                                                  1560
aaactcatgt tgaaatttaa ttatcatatg taatggtatt ggaagatgga aactttaata
                                                                  1620
gatgataggg gccagggtgc agtgctcacg cctgtaatcc caggactttg ggaggctgag
                                                                  1680
gcaagaggat cacttgagca caggagtttg agatcagcct gggcaacatg gtaagatcct
                                                                  1740
gtctctaaaa aaaaaacaca tacaaattag tggggagtgg tggcacacac ctgtagtccc
                                                                  1800
agctattcta gagtcgaggt aagaggttca cctgagccta gagaggttga ggctgcaatg
                                                                  1860
agctgtaatt gcanccactg cgctccagcg tggacaacag agggagaccc tgtctcaaaa
                                                                  1920
aaaaaaaaa aaactcgag
                                                                  1939
```

```
<210> 1613
<211> 731
<212> DNA
<213> Homo sapiens
<400> 1613
                                                                       60
ggcacgagac ctggggttgt cggtgctgct ccaggatgtc agatgctccc ctgggggtgt
                                                                      120
gggtgctgct ccaggctgtc agatgctcgc ctgggtgtgt gggcactgct cctgactctc
                                                                      180
cgatgctcac ctgtggttgt gggtgctgct ccagaccatc agatgctcac ctgggtgtgt
                                                                      240
gggtgctgct ccaggttgtc aggtgctcac catgggctat gggtgctgct acctgttgtc
                                                                      300
agatgctcac ctcggggtgt gggcactgct ccgggctgtc agatgctcgc ctgtggctgt
qqqcqctqct ctagactcta cgatgctcac ctgtggttgt gggtgctgct ccagacaatc
                                                                      360
agatgctcac ttggggttgt gggtgctgct ccaggtcatc ggatgctcgc ctgggagtgt
                                                                      420
ggttgctgct ccaggctgtc ggatgctcac ctgggggtgc agggtgctgt tccaggctgt
                                                                      480
                                                                      540
cagatgetee cetgggggtg tgggtgetge teegggetgt cagattetea cetgtgegtg
                                                                      600
tgggtgctgc tgcgggctgt cagatgctca cctggggttg tgggtgctgt taaaggctgt
cagatgctcg cctggggttg tgggtgctgc tccgttcggt cagatgctcg cctgggggcg
                                                                      660
tgtgtgctgc tccatgggtt cagatgctcg cctggaggta tgggtcctgc tccgggaggt
                                                                      720
                                                                      731
cagatgctca c
<210> 1614
<211> 1374
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (642)
<223> n equals a,t,g, or c
<400> 1614
ggcacgagag atgttggtcc cacgtgactc cctttgtgca aaagcagatc ttccctgaca
                                                                       60
                                                                      120
gggatctgca agtgtgcaga gatcacagtg ctgtccacag tggtgccctc agggggaggc
aggaaacgct tccacttttt actttttgta actaggtttg ctagaaagcg tatatttata
                                                                      180
tttgtctttg gaaaataatg attagaaata gaaggcataa aagtaataaa tattcattaa
                                                                      240
agaagatgag gcatgaggca tgaggcgtga tcccttctac ccataggcgc cagtgttgca
                                                                      300
catcgtggtg ttctttctgg gatgtttctc gtaagcactt attaagttga cttgaaactg
                                                                      360
cageacgeat gttctcgcat gccactctcc cttgcagagc agcccgtggc gcctcctctt
                                                                      420
                                                                      480
caggggccat ctgccagttc tttcgggtgg ttctgtgccc gcatcagctc ctggcagcca
cccgtgtcca gcccacgagg gagcccaccc ttggacatat ctaagctccc cgaccacctc
                                                                      540
                                                                      600
cttggccttt aatgggagtg ggatcagaga cagaggggcg acaagacaga gggccccggg
                                                                      660
gggtctcatg ggggggcggg gcaagagcag gcattgctga anttgggtca cctgccctct
                                                                      720
gtcaggagca acgggggcct gaatcccagt ccagcctcag cctcactgtg gtctcacctt
tctccccagt ttgtaaagct gtgaattagg gacaggaacc ctgaacaatt ttgagagtca
                                                                      780
catgagcatt tggaagtggg ctttgtaggg gaaagtgagg aggcccagga ggctggtttt
                                                                      840
tgctgtggtc acgtgtgggc ctgggagagc ccagccctgc tctggcccgc ccccgtctcg
                                                                      900
ccatctgtgg aacttttggt ttcaagcagc tgcaagagtt gccaaaaggt tgaaagaatt
                                                                      960
cagctgcctg actccaggtc ctggcatccc caggagaggc ccctctttcc caggggctct
                                                                     1020
                                                                     1080
ggtcaaagtt ccagagcctg gcatccccag gagaagagct cctctttccc agagctctgc
tcaaagtccc agggagcccc ctggtcctgc atgggctggg gcaaccatgc tcccgagtct
                                                                     1140
                                                                     1200
tgtggctggg gttcagtgct ctgaccaggg gacaccaggg cagggtggac ctctaaaccc
tgtgcactga gggaggagtg aggggtcccc agagcactgc tggggcagct gggagcagcc
                                                                     1260
                                                                     1320
agggaggagc ctgggagaca ttccggcggc tttgttgtct gagtgaggga ggaaagggga
                                                                     1374
gtaaagggtt gagtcagggc ctgcctgggg cttttcctgc caccaaactg aacc
<210> 1615
<211> 1000
<212> DNA
<213> Homo sapiens
```

```
<400> 1615
ggcacgagtg ttcaagacat tttttttctt ttctttaatt ttcagaagtt tgactatgat
                                                                   60
gtgtgttggt aaggatttct tttggtttct cctatttggg tttgctcaga ttcttgagtc
                                                                  120
tgtaggttta catcttttgc caaatttgaa aagttttctg tcattattcc tttgagtata
                                                                  180
ttttcagtcc caccctcttt tgtaactctt tctggaactc caatgacaag cgcattagat
                                                                  240
cttttgttat ggttccacag atccctgagc atcaattcat tttttctcat tagacttaaa
                                                                  300
tagactttca agggactcaa aacagagtct actttctctc ttttgtttag actgggcaga
                                                                  360
ataatggcct ccgaaagatg tccacatcct aatctctgga acctgtgaat atgttacctt
                                                                  420
atacagcaaa aggacttggt tgacatgatt acattaagaa ccttgtgatg aggagattat
                                                                  480
tctggattat aatgggccca atgtaatcac aagggtcctt agaaatggaa gagagttaga
                                                                  540
aggagatatg actatggagg aggttggagt aatgtgatgt gagaaggatt cgatcctctg
                                                                  600
ttgctggctt tgaggatgat agaaggggac tacaagccaa ggaatgtggg ctgcctccag
                                                                  660
aagctaaaaa aacaatgaaa aggattcttt cctggtgtct ccagaaaaga atacagccct
                                                                  720
tccaacact tgattttagc acttctgacc tacagaactg taagataaaa aatgtgtaat
                                                                  780
actttaagct tctaaatttg aggtaatttg ttgtgagaac aataagaaac aaacacagga
                                                                  840
900
ggagteteae tetgttgeee eagetggagt geagtggtge gateteaget eactgeaaae
                                                                  960
tctgcctccc gggttcatgc cattctcctg cctcagcctc
                                                                 1000
<210> 1616
<211> 1122
<212> DNA
<213> Homo sapiens
<400> 1616
ggcacgagtg aaagcctaga ggtaatgaca tgctcggcga gctcaaactc ctggaaactc
                                                                   60
tcccaggaaa actcgggatg cgaagatgta ctctagaagg gaacagatgg cttctgtttt
                                                                  120
tgtgtgtggt atggaatgga tggcaaaagg tcagtgagct ctgtgggaga cagcacggtg
                                                                  180
ccaaggggac cgtgtcacct tcctcacctc tgcctctgtc tcagacacct gctgacatat
                                                                  240
gaccaggtgc agatggagca gtgccagcca cgccctggga tgaggagatc aagctggtgc
                                                                  300
tcagccccag caaggcgggg tcagtgacat ccctatatgt gaatggggac acatttqtaa
                                                                  360
gcagagacat gaagtgacag aatgagatca cccacagcga catctgccac tacccaqqtq
                                                                  420
actgggccaa aagtgggctg tggaattgga acaaaataca acaqattqta tttaqatatt
                                                                  480
gactccattc taatatatag actttgcaag gtaaacattt caaaattgct ctttactatg
                                                                  540
agaaccaaat gttttctcca gatattttga tataaatttt tgatgaaata aatgcatcct
                                                                  600
aggaaaggcc ttgctcccat attaggaaag taaattctat atccaaggac actgggtaac
                                                                  660
tacageettg aatgtteatg ggetacaata acgaegatta tgagggaace agatetetet
                                                                  720
cctttactgt gtttgggtag atcctttcat cagtatgtca aggctactga aatgttagtg
                                                                  780
taatcttgat gtcagacagg ggacagggtc tttgcttgga agcctcccaa atccagggcc
                                                                  840
tgtggaaagc caaagcattc cctctgagat ttcggcgaaa tcttttgtct cctaattccc
                                                                  900
960
gttgcccagg ctggagtgca atggctcaat ctcggctcac cacaacctcc gcctcccagg
                                                                 1020
ttcaaatgat tctcctgcct cagcctccca ggtagctggg attgcaggca tgcaccacca
                                                                 1080
1122
<210> 1617
<211> 996
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (190)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (985)
<223> n equals a,t,g, or c
<400> 1617
```



```
<210> 1619
<211> 473
<212> DNA
<213> Homo sapiens
<400> 1619
gaatteggea egrgeaatee acceatettg geeteecaaa tttetgggat tacaggtgtg
                                                                        60
agccaccatg cccagcacat ttctttttat aattacccaa tctgtggtat tctgttacag
                                                                       120
caacagaaaa tgaaccaagw sgtatgttct ctttggtatc tgctgctttt attcaacatt
                                                                       180
aggtttataa aattcatcaa cattgatgtg catagcaata gttcattcac tctcattgcc
                                                                       240
ttatgggacc ccgctgtatg agccatctat ctattgtatc tatggctgtg gracaaacta
                                                                       300
ccccaaaacc tagtgactta aaacaakaac atttatcttg catagtttct atgcattagg
                                                                       360
aatttcaaga gcagcctagc tgggcagttc tggctcaggg cctctcatgt ggttgcagct
                                                                       420
gagatgtcct tcagggctgc agacatctga ctggggcttg accgttgctc gag
                                                                       473
<210> 1620
<211> 1478
<212> DNA
<213> Homo sapiens
<400> 1620
ggcacgagtt acactagata aacctgtatt ttaaaagtat tcaaacaaaa cacaacacac
                                                                        60
ttacttagag caataataat aaatattaca gaataatata atccttcccg ttctaaaata
                                                                       120
tttttaaaga atatgataac tttatattgg gtcctagata ccatactgta tttagggaat
                                                                      180
ttaccaagat agagctggct ttattgtaag tcaagcaaaa tgaactggcg ttcttgtaag
                                                                      240
ctgggttcag tctactatta tcggttctgt acagtgtctc ctcgtgtgct agtgaaacag
                                                                      300
gatggggggc gaggaacctc cttcccatct tttactagcc tgagaagtat cttttcaata
                                                                      360
ttttataatt ttgcctttgg caaagggctg cttatctcct gggaattcag gcacattttg
                                                                       420
aagatttccc catagccaat gagcacagaa tgattattct cacaaaagtt cttaagaaat
                                                                      480
gtcacctctc ttgtgtctcc ttctttctag ataagctctc cccacacctt tctcctgaga
                                                                      540
cagtctagaa tctccctttt atattgctgc agaaacacag actcatttcc atacacgttt
                                                                      600
acteeggeae etatageata gateaatget atggacaegt getgttgtgt gagatttaaa
                                                                      660
agtaaatttt ccattcagag atttttaaaa aaaaaaatct ggtcatagca gccattagtc
                                                                      720
aacttagtct tcattgccct cctttttatt tctaagcatg attcattcag gatataagat
                                                                      780
tgcatgggca atcattctag tattaaacac cttggaaaga tgaggaccat cttcttcctc
                                                                      840
cctgtgtctg cttctctttc tgttccatct tctttccttc cccatttctt tcactctttc
                                                                      900
cttccctgtc caggtcctgt tgaatgctga ctcaggccat ctgtgctttc caggccagct
                                                                      960
ctttcactta ttgctcatga ttttggccaa gccatttaaa atgcctaggc ctcaatttcc
                                                                     1020
tcatgggtaa aggaagctaa taaggtctac ctaatggacc cacccaataa aattcttttg
                                                                     1080
agaattaagt gggaaaatgt atattaaaca cattggaaat tettgtetae aqqqqatatq
                                                                     1140
tcatcaatgg gagttgttac tgctgctgtt tctactagat tccaaattga qaaqaaaatc
                                                                     1200
tttctaaagc aagtatcaag tagagtcagg aggaagcatc taaagtttct qcaagqacca
                                                                     1260
tggcacatct tcttgaacac tgctgggatg attatttgga taataggagt tggcaccatt
                                                                     1320
ttcattattt tataggcaat atagaaatat atctgcactc ttctttaaaa aaattactaa
                                                                     1380
tacataatag ttgtatattt ttatggggta caagtgatat tttgctacct gcatagaaag
                                                                     1440
tgtaatgatc aagtcagaat gttaaggttg tccatcac
                                                                     1478
<210> 1621
<211> 601
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (7)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (292)
<223> n equals a,t,g, or c
```

```
<400> 1621
                                                                     60
aggaatncgg cmcgagcaga tagagaaact gaggtccaga cagggaaggg actagccctg
                                                                    120
cacactaact agtaattccc actcaacaga tcaacagatt cctcttgcag gaacaagagg
                                                                    180
aatttcgttt cccttccacc aacaaatcaa agatcwgtta tggtttcatg ctaaccgcca
                                                                    240
ctgakgcttg gttggctttt ctctcttgct tatcacagtg acatctgcag antaccctgg
                                                                    300
gcattctgta gaaagtgtgc actgcctggg gtgggagttg atgggggtta ggattaggta
                                                                    360
                                                                    420
gaccccctct gtgctcccac aatctcctga ggaccctgag ccccagtcct gaccacatcc
tcctccagcc attcttgatg tgtctccctg ctcaattggg acttcttgag cacagggacc
                                                                    480
                                                                    540
cttgtacgga attatcttta tgtgactgtc acatatcttg gaggtgaact tctggagagg
                                                                    600
gggtcagagg gagaggcctg ggtgagttgt gctgccttcc gtcatccccc tcagtctcga
                                                                    601
q
<210> 1622
<211> 1120
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (994)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1045)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1049)
<223> n equals a,t,g, or c
<400> 1622
gttgcagaat ttgggcacga ggctccccat gccaggttcc tgcttctcat ggtccttctc
                                                                     60
acggttgttg ggagttttcc tatctctcca gtgctcttgg aagacggttt atggtatatt
                                                                    120
                                                                    180
atcaagggaa gcctgaaagg gaaactgcta gttgtgttca ccacccaacg agatctggag
tectgeette titetaeact tagteacaca gacetageee cacageeete tagtigeagg
                                                                    240
                                                                    300
gcttgattga gaaaagtatg cagaggccga gagtgtgtgt gaccgaccac atcatagcca
togaatgttt atcaattooc attoagtgtt toagtgaato ttoagtagto totgtgttot
                                                                    360
                                                                    420
ttgttagtca cctggtttag atgttccatg aattgttctt cctcttctag caatgatgac
caacgtctat gaattgttaa tatttaccgg ggactgtgct aagtgctttg catgtgtatt
                                                                    480
tttcatttgg tgttcgctat aactaggagt aggttgtttt gctcctttca cagaggagga
                                                                    540
aacaggettg gaaaaggtca etggcatgca taaateecaa getagteagt agcagageta
                                                                    600
gtcggtagca gaactagtcc gtagcagagc tagtcggtag cagacctagc cggtagcagt
                                                                    660
gctagtcggt ggcagagcta gcctttgaat tgaggttttt ctgactccag attccatgcc
                                                                    720
ttaaactgac ttcctgaatg tatccactgg gataaatttc tcaaaatgga attggtagat
                                                                    780
                                                                    840
cagatgatat atgagtttaa aatatggata gatagttcca accggttttt cagggcattg
cctggtgttt accattcttg kgtatgtgct tatttgcacc ascagtattt atcttttagt
                                                                    900
tttgctttta aaaacaaatc ttgtaggcca ggtgcggtgg ctcacgcctg taatcccagc
                                                                    960
                                                                   1020
attttgggar gccgargtgg gaggattgcc tgancccagg agtttgaaac tggsttgggc
                                                                   1080
aacatagcga ggcccaatct cccanatana taaatgatat ttttaaaaac aaaataacac
                                                                   1120
agagcccttg gaaatcaaaa atctagcagg aggaaaaaac
<210> 1623
<211> 755
<212> DNA
<213> Homo sapiens
<220>
```

```
<221> SITE
<222> (512)
<223> n equals a,t,g, or c
<400> 1623
gattttctgt aaattaaagt tgtttttact aaattatggg ccatattttt tggatgtgtg
                                                                       60
                                                                      120
ctctgaaact aatactgctt gcaaggagaa aaaaaggaga tgcaagtgtg tctaatatat
tggatacata aaagctggag tatgcataat cgtcttgcaa gagttcttaa atctctgtat
                                                                      180
ataaactgtt taaaagtaaa ttaaaattat teettaatga aatacaaate tgaagteaet
                                                                      240
                                                                      300
tgaataacta atcattttat gacccatgca gtgaattttt aatgcctact tctacctgat
                                                                      360
tattttagat atgtctgtgt tgtaaattaa aagctacata aatcattaat gtgttgatac
                                                                      420
agatcagtga actgcttaca ctatatgtga ttccttagga catacaatgt ctgattcacc
tecetecett teaattatat ggetgeeagg etettttet etatteattt tttgeaaggt
                                                                      480
cttatttggt agaactgcat tccagggtct tnatcacttt cccaagagga actgatgttt
                                                                      540
ccaatcaaaa gagggctcac actgcaaaaa tgaacaggtc ctaaatccaa gagtgtgaac
                                                                      600
acacaatcta cgagggagaa gtttgctttt atttttgttt ttgttttagt aatctatgct
                                                                      660
cccaagaaac tgtagcaacg aaacataacc tctgcacttt tttaggtcat tgcagccttt
                                                                      720
                                                                      755
ttaccttcct tgaaaatgtc gtgccctttc tgtac
<210> 1624
<211> 2388
<212> DNA
<213> Homo sapiens
<400> 1624
acgaggtaga aaccttgaaa ttttagaaaa catcaatttc atgcctaatg ttttgcctgg
                                                                       60
tataattgtt gagcccagag actgtttgta cttgaacagt tcaggaagaa aagaagtaga
                                                                      120
aatgattttt gttgctgcca cacttcctac ttttttgtat gagcttaaac ctatgtcttg
                                                                      180
aacatttata tcaccattct tgcccctgaa cacaaatgaa ttttttatct ttattttatg
                                                                      240
ctacatttct atacaattaa atttatattt tcaattgttt gtttgcttgc tcccattggg
                                                                      300
agtcgttaaa gtgtaaacag ggcataggga ctgcaattaa ccttgagaac aaaagaacaa
                                                                      360
                                                                      420
tttatcactt taccaaacaa caaaattcac tcttattgtt aataattcat aataaaggca
                                                                      480
gcaactatca attaagttga gaacagaagt ggcaaaacag gcacagtcat caaatttgca
                                                                      540
atagctaact gctctattct gaattatcag cagtagctga gaactaccca aaggtttgct
                                                                      600
gatggccaca gtacagaacg attagtgaat tcacggctgc atgtctggtt tgctctattt
                                                                      660
cccaaactga gtaaataaat gagagcttgc taatcaggac tattaggggt tgctaggaaa
                                                                      720
taaaaaattt gctactatgg gctgtctcca acctagcaag gagtttgaca caaaacttct
attacacacg gttaactagc acttaaaaca aatatatcta taagaattta tcagtactgg
                                                                      780
tctgattcgt aggctacccc aaaaccctgc ctagccaatg aagtagctgg aatagaagga
                                                                      840
aaggtaactg ttgccaactg attgaacaac tttttggttc tttttatttg taacagtgta
                                                                      900
                                                                      960
cccccaaaat ctgaggtgtt tgagggttac ctccctctgc caaacaccta gacatttact
                                                                     1020
gaacagactt ttactacgaa gtgttaatgg aagtcaggga ccccaaatgg agggactggc
tgaagccatg gcagaagaac ataaattgtg aagatttcat ggacatttat tagttcccca
                                                                     1080
aattaatact tttataattt tttacatcta tctttactgc aatctctgaa cataaattgt
                                                                     1140
gaagatttca tggacattta tcacttccct aatcaatact cttgtgattt cctatgcctg
                                                                     1200
tctttacttt aatctcttaa tcctgtcatc ttcataagct gaggatgtat gtcaccatag
                                                                     1260
gaccctgtga tgattgtgtt aactgcacaa attgttcata actcatgtgt gtttaaacaa
                                                                     1320
tatgaaatct gggcaccttg aaaaaagaac aggataacag ctatgttcag ggaacaaggg
                                                                     1380
agataaccat taggtctggc tgcctgagag ccaggcagaa cagaaccata tttctcttct
                                                                     1440
ttcaaagcaa taggagaaat atcgctgaat tctttttctc agcaaagaac agcctggaga
                                                                     1500
aagagagtgt gttcctagca ggaggtctct gaaatggctg ctctgggaat gtctgtctta
                                                                     1560
                                                                     1620
tacggatgta gataagggat gaaataagcc ccagtctccc gtagtgctcc caggcttatt
aggatgagga cattcccacc taataaattt tggtcagacc agttgtctgc tctcaaaccc
                                                                     1680
tgtctcctga taagatgtta tcaatgacga tgcgtgccca gtggaacatg caacttcatt
                                                                     1740
agcattttta atttcacccc agtcctgtga tctcgccctg cctccatttg ccttgtgata
                                                                     1800
ttttattacc ttatgaagca tgtgatctct gtgacccgac ccctttcctg cttttctgga
                                                                     1860
gggtaaggac ccctgaaccc cttgcctcca cggcacgagc tcgtgccgtt ttttcctgtt
                                                                     1920
tttggatttt atgtaaataa acagagtcat aaatttgaca ctctcaaaat atcccccatc
                                                                     1980
agattcatgt aagactttta ttttggtgat acttctccac aaccatcgca ctacaactta
                                                                     2040
ccttaatcca ctcaactaac acttacatat ttggctttag agatgtatat caatatcttc
                                                                     2100
tgtggtctgg agataattct tatcatatta gcaccttaga tgtaattgcc agtattcatg
                                                                     2160
```

| atatgttaaa | aaattattaa | atgtctacta | aatttgctac | agcttagcta | cttcacgaga | 2220 |
|-------------|-------------|------------|------------|------------|------------|------|
| - | | - | aaatttcaaa | | | 2280 |
| | | | tcttttcttg | | | 2340 |
| _ | | | tgtctgcctt | | • | 2388 |
| 333 | 333 | | 5 5 | 5 5 | | |
| <210> 1625 | | | | | | |
| <211> 1245 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | canione | | | | | |
| \213> HOMO | saprens | | | | | |
| <400> 1625 | | | | | | |
| | casatacttc | caddtaadad | ccagctgtgg | taaaancana | taaatatata | 60 |
| | | | ttttgtttca | | | 120 |
| | | | ctgcaggggg | | | 180 |
| | | | | | | 240 |
| | | | gtcacactcc | | | 300 |
| | | | caggccatag | | | 360 |
| | | | ggtttcacgc | | | 420 |
| | | | tccaatgtgg | | | 480 |
| | | | atgcaggtgg | | | 540 |
| | | | gatggaccta | | | |
| | | | catctgcacg | | | 600 |
| _ | | | atacattcaa | - | | 660 |
| | | | tagaaatcaa | | | 720 |
| | | | ggtgccctgg | | | 780 |
| | | | aaaggaagag | | | 840 |
| | | | tggactggac | | | 900 |
| | | | tgggaagcct | | | 960 |
| | | | cagggttgat | | | 1020 |
| | | | acggttgggt | | | 1080 |
| gstgktcttt | ygctgaggaa | ggcggactyc | cttagctgga | gcaagggagg | ctggcagctg | 1140 |
| tgggatgcgt | ggcccgattg | cacttccctt | ttataggagt | ggaggtgtat | ttcgctgttg | 1200 |
| gggacatgca | aacgtgctca | gcctccccct | ctctccctgg | ctcga | | 1245 |
| | | | | | | |
| <210> 1626 | | | | | | |
| <211> 431 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1626 | | | | | | |
| ggcacgaggt | gaattgtctt | ctccacatat | ccattagcag | agtgcatgtt | cggtaccaaa | 60 |
| | | | tgctctcgta | | | 120 |
| | | | ccaggagtac | | | 180 |
| ttttaagctt | ctcagcagtg | tttttcacac | cctgctttcc | gtgtgcatgt | cttgtcactt | 240 |
| atgattaaac | taaacacaag | tttttccatt | tttaatgctg | ctatgcttct | atacctctgg | 300 |
| taagtttgat | catcgtgttc | tgggttggga | gggtgagagt | tcttgtgatt | ccctttgtac | 360 |
| ttccctgaca | ctaacacatg | ccctgcacac | ccatcatgtt | gcatcagtgt | ccatggtggt | 420 |
| ggtataaaat | t | | | | | 431 |
| | | | | | | |
| <210> 1627 | | | | | | |
| <211> 1011 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <220> | | | | | | |
| <221> SITE | | | | | | |
| <222> (863) | • | | | | | |
| | uals a,t,g, | or c | | | | |
| - | | | | | | |
| <400> 1627 | | | | | | |
| gattcaaaat | gcatggccca | gctgctcctc | atattgaagt | tgcgaccatg | ggatttggca | 60 |
| | | | cacagctgag | | | 120 |
| | | | | | | |

```
agcccagact tgtcatcctg taaatgaaca atccccagtc cccgggcctc attttattca
                                                                      180
cttggctgag ctgcctgttt gctttccgtt ctgtgctcgc cagctcacta agcaagagga
                                                                      240
tccgtgcctg actgcgtgga gaagctgtag aggaaatggc caccctgact gtcccagcac
                                                                      300
ctmccggggt ggcccggggc ctgggscctg agcagaactg tgataaaggg aagcagggaa
                                                                      360
gcagtgcgag arccctgacc aggtgcarga gcctgattcc gaatccamct ctgccatggg
                                                                      420
cagattgcat gatgccatca gagccctcta amctctggcc ttcagttgtc acacctgtaa
                                                                      480
aatggggaaa tattctagag aagtggstca aaacctgatc atccatcagc ytcccccaa
                                                                      540
gaacatgggg acagtgcaca tggcaaggcc ccatgcccag agtttctgat tccacagttt
                                                                      600
gggatgaagc ctaagaatgc gcatttccaa caaggcttct ggtgaggctg atggcccagg
                                                                      660
gacctcactt tgggaagctc tgtagtaaat ccagtttctc agccagtctg ctctgtagag
                                                                      720
ctcctgagac agactctttc cctaggcctc ccctgaggtt cttacttaag caagtctcca
                                                                      780
tttttcaaaa gctctgccag gtaactctat atggcactag ggctgagagg cacttggtgg
                                                                      840
atgtttctaa gatcccacgt agntctcaca tgccaggatg ccatgatttt gaagcagagt
                                                                      900
gcctcctgcc ttgccaaggc tgacagcaca cacagggcaa aacgccatcg tcacatattg
                                                                      960
gaatttcact ctttgaaaac ctggtaatcg tgtgtcccat ttcagctcga g
                                                                     1011
<210> 1628
<211> 569
<212> DNA
<213> Homo sapiens
<400> 1628
attcggcacg aggacttatt kgggctaatc agcctaaaga ggatgatgca tataatatgc
                                                                       60
ataggagaga tetetetgte tgtgtetgte tetgtetetg tecetetete tecetttete
                                                                      120
tttgcaaaac acgcattcac tgttgccgtg aactgccaca gatagctcca tagtgaaact
                                                                      180
gaggetgaaa agggtagagt aggggcacaa agtgageegt ggetetteat ggeateaete
                                                                      240
agactcagct gccttgagcc agctccaccc ccgactccca ggtattcaac ataataaatt
                                                                      300
tggtggtgtt gttttgtttt gttttgtttt tgtttttgtt tgcttttttt tgagatgtag
                                                                      360
teteactetg tageceaage tggagtgeag tggeatgatt eggeteactg caacetteae
                                                                      420
ctcccaggtt caagcgattc tcctgcctca gcctcctgag tagctgggac tacaggtgca
                                                                      480
tgctaccacg cccagctaat ttttgtgctt ttagtggaga cacggtttca ccatgttggc
                                                                      540
caggctggtc tccaactcct gggctcgag
                                                                      569
<210> 1629
<211> 1223
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (243)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1218)
<223> n equals a,t,g, or c
<400> 1629
ggcagaggcc agactttgga cctcccactc agaggtttct gtctccatca ttctgacctg
                                                                       60
ctgcttgtcc acatgtgggc cccaactcca cttatccacc taggacttgg taaaatgcaa
                                                                      120
atctgagtat gctgcttctt tactgaacac ccttcaatgg tttgccaagt ctttagcatg
                                                                      180
tggcacatga tgtccttcac accetgctcc ctgccttgtt ctttggcctt gtgcctccct
                                                                      240
atnggccccg cctgcctgcc cccggtcccc ctcccctca cctccaacat ccaactgaaa
                                                                      300
gccaaggctg gtttgctcct gagacaaagg ctctgctcca ttgcgtcagt tcacctccct
                                                                      360
gccctgctgg tgtcagcaag gtaacaatca agctggtgac cccaccagcc tcatctccca
                                                                      420
gccggtcctg ccaaaccttc ttgacattgc cagtttgtga ccgtgaaggc cacatggtcc
                                                                      480
tccaaatcst ttctccccaa gaaaaggtgc aaaattgaag cacacatgta gggggaccct
                                                                      540
gggagttcaa ggagcccagg ttagaaatcc ttaaacccag cctgcttcac acaggggctg
                                                                      600
gcttgatgac cgtgagtgct gccttcacct tttccccact gagctaactc ctaactcctc
                                                                      660
acccgtgaca cggctcaaga tcgcttctct tagaaggaag tcccgatccg ctgctacccc
                                                                      720
```

| acatggcccc ca | agctggat | taatacctac | attcattccc | agcgctgccg | tgaaaagtga | 780 |
|----------------|---|-------------|------------|------------|--------------|------|
| ctacaaaggg ag | | | | | | 840 |
| aatccaggtg to | | | | = | | 900 |
| ttctcagtgt cc | | | | | | 960 |
| ctaatctctg cc | | | | | | 1020 |
| cctttataaa ga | | | | | | 1080 |
| ttaaatccat ga | | | | | - | 1140 |
| attcacaggg at | | | | | | 1200 |
| cccacaccag cg | | | -50000000 | | accongoong | 1223 |
| | | 33 | | | | 1220 |
| <210> 1630 | | | | | | |
| <211> 1626 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo sa | piens | | | | | |
| • | - | | | | | |
| <400> 1630 | | | | | | |
| aattcggcac ga | gacaacac | caacatatct | gcagcccata | gtgcaaatgt | ccatgtatgt | 60 |
| cagattaaat gt | tacttatt | atttaggtct | gttttttaaa | ttaaagtttg | cacttgcttt | 120 |
| gcagccagcc ag | | | | | | 180 |
| atgtgttact to | | | | | | 240 |
| gtgactgtga ag | | | | | | 300 |
| tttctgactc tt | | | | | | 360 |
| ttgttcattc at | tcatccat | ttaaatccca | aaggaattta | aaagaagagt | aacatttaac | 420 |
| ctgacaaaga caa | | | | | | 480 |
| ataacaacaa taa | ataatagc . | aagctcatat | aagcaagaag | caatagtcag | tgtgtcatgt | 540 |
| tttgggggaa tta | | | | | | 600 |
| ctcctacccc act | tggcctga | tcacttctag | aaacttccag | attctttacc | tcttcatgac | 660 |
| atttataatt gc | tgttcttt | ttttggaggt | acaatataca | tataaaattt | accatcttta | 720 |
| tcatttttag gtg | gtacagtt (| cagtggtaat | atatctaaat | ttatattctt | tatttttctg | 780 |
| ttctttatgt cta | aggacatt | tcaatcctca | acacttcaca | ttgctaaatc | ctcatctctc | 840 |
| aagcctcagc tta | aaatatta 🤄 | ccttttcaga | gagaccttca | cagatgatgt | aatataaatc | 900 |
| actctcccct acc | cattattc | tcaaagacag | aaatctattt | tctttatttt | actaatcaca | 960 |
| ggctgaactt at | | | | | | 1020 |
| agggccagga caa | | | | | | 1080 |
| tactcaatag cta | | | | | | 1140 |
| acaggaagag aat | | | | | | 1200 |
| ctaaatcttt aaa | | | | | | 1260 |
| acgtttctat taa | | | | | | 1320 |
| aactgaggga ggg | | | | | | 1380 |
| aaaagcttag gct | | | | | | 1440 |
| aattgaacag aat | | | _ | | ~ | 1500 |
| gacttataga tt | | | | | | 1560 |
| gatgaaaaac agt | ttattgga 1 | tattttgaat | ttgatgcaat | tattggatat | gtttcagtct | 1620 |
| ggagct | | | | | | 1626 |
| -010- 1601 | | | | | | |
| <210> 1631 | | | | | | |
| <211> 1347 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo sar | piens | | | | | |
| 40.00s | | | | | | |
| <220> | | | | | | |
| <221> SITE | | | | | | |
| <222> (830) | + ~ . | ~ ~ | | | | |
| <223> n equals | s a, t, g, (| DT G | | | | |
| <400> 1631 | | | | | | |
| tctcccctac act | teetetee : | accacaca | attactttra | attetteess | catocccast | 60 |
| tcccacttgc ctt | ttraaact (| ractcacayya | gtcccttta | ctacaacaa | attactact | 120 |
| ctgcttgctt ggd | | | | | | 180 |
| agggaagcct ttt | | | | | | 240 |
| tgctcccttc ato | | | | | | 300 |
| -3 acs | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | -5 | 500000000 | o ogug cocac | 200 |

```
360
ctcattctcc aagaattgtc accactggtc tttatactcc tggaaggcat gaacccaatt
tattgtcttg ctctctgctg catctctgat agccagccca atgccttgcc ataattgttg
                                                                       420
aaacaaaatg catgttwatc tattgaaaaa aaaatttttt tttgagawgg agtttcactc
                                                                       480
                                                                       540
ttgttgccca ggccagagtg caakggtgcc atctcggctc accacaamct ycgcttccca
ggttcaaggg attctcctgc ctcagccccc tgagtagctg ggattacagg catgtgccac
                                                                       600
cacacccagc taattttgta tttttagtag agacgggatt tcaccatgtt ggtcaggctg
                                                                       660
gtcttgaact cccaacctca ggtgatcctc ctgcctcggs ctcccaaagt gctgagatta
                                                                       720
caggcgtgag ccacctcgcc cagcctattg aaaatttgar ttggagaata aaaggatttt
                                                                       780
ggaataaaaa ttaaaacaaa gcttcccatc atwggayccs ccttatgtan cttgtacctg
                                                                       840
tggcaaaata cggarttgtc ttctatcart tcttctgctg aagcccaggg aaarartgtw
                                                                       900
                                                                       960
tgtaaaaatg tctccctgtg gctgagagcc agctttatct ttttatccta gtctgggcta
                                                                      1020
tcatttttat ttttatttt atttttatta tattagagat ggagtttcac tacgttaatg
ttgtccaggt tggcctcgaa cccctggctc aagtaatcct cctgcctcag cctcctgagt
                                                                      1080
agctgggact acagggatgt gccaccacac ccggcttatc atttctaaca tgaaaattta
                                                                      1140
aaagttaact ttaaatttaa tgcgttaaag taatctaacc cagtaacata aaaatgtgaa
                                                                      1200
gttgggctgg gcacagtggc ttatgcctgc aatcccagca ctttggaagg ctgaggcgag
                                                                      1260
cagatagett gageetggea gtteaagace ageetgagea acatggeaaa accetgtete
                                                                      1320
taccaaaaaa aaaaaaaaaa aactcga
                                                                      1347
<210> 1632
<211> 741
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (86)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (92)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (640)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (673)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (696)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (712)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (713)
<223> n equals a,t,g, or c
<400> 1632
ggaaacagct atgaccatga ttacgccaag ctcgaaatta accctcacta aagggaacaa
                                                                       60
```

| aagctggagc tccaccgcgg gaattcggca cgagtccata ctgtggtggc catggggatg aggtaggga cttgagacct ttttgtactc tctaggctgt agcaccaggc agctcttggt ggaaccatca ctcatcacg atcactgctg tgaaaacctgg ggntacccaa taacgaaaag gccgcaccga | cggggagcac ataatttggg atagaacagc ccaaggtctg tggcaagaat tctccctgct agccacttgt cctctgagcc tacaattcac tttaatgctt | ccagcaaagg taaacccaac ccggggcaga atttccctc gcggaccaga gatggggggc tgagccctg cttgctcgaa tggccgtcgn | gccccgctc tggcttctgg caaagaacct accccaccg ctctggtgat tcggtggcac gcactctctc ggggggcccg ttttacaacg | ccactctgct gagagcaaga cagcccaggc gagggctcca aactgctctg acttaatcct ttgtcccagc gtaaccaatt tcgtgactgg | 120 180 240 300 360 420 480 540 600 660 720 741 |
|--|---|---|--|---|--|
| <210> 1633 <211> 962 <212> DNA <213> Homo sapiens | | | | | |
| <220> <221> SITE <222> (294) <223> n equals a,t,g, | or c | | | | |
| <pre><400> 1633 ggcacgaggg cagactcagg acaggctaag ttgagctaca gaggaacctc acaggttggt gaacataaga tttcaggaag ttgggartaa tggattttaa ggcttttct ttagagactg tgacagctgt ttctttgaat tttacagaag aagccaaata gcgggcatct cagaracccc ctgggggctc tgtgaagtcc aactctaaaa gtcattgtgc acagggaaat gtagactctt cccttggcat ggagcctcta cactgtggtg catggagtc acgtctagtt accaccgcca tgtctgcaga catgacttct ag</pre> | taaaggggaa tgtcgtggaa cacctgccat agatatcttg agtatagatt gtgactccac taacatggat gttagcttca agtctgaaat aatgccagcc tctgattaca ccggctctgg caggtaacat gcctctgcaa | ctgagccaga agtttttgtt ctggatgaag gtgtgcatta tgaattgctt accaagattk caatggtaaa cccttgtgtc cacctctag ttgcctcact catctgagtt gccatggggt gacccagttc gacttcttg | caagggagga ctggctgtga gagattgaga aatgcactct tagattatat gaccacaaag ccactcttga ctgagatgct atccaccac tttagtcaca gccacatttt gtggttttgt tctgccttgc attacccaat | aagagaggtg aagtaagaag atggcagcma tcancccttg attttttgaa ctgcctggca taaatacaga ggctctgacc agtcccttcc gacactgacc ggaaaagatg gaatgggacc ctcagagcgg attttcctct | 60 120 180 240 300 360 420 480 540 600 720 780 840 900 960 |
| <210> 1634 <211> 943 <212> DNA <213> Homo sapiens | | | · | | |
| <pre><400> 1634 gtgtattttg ataactcagt tatttctatg ctgcaatttc tatgtaacca actaaaattg ccattgctca aaataaagtg aaactttttt gggatgcagt gctctgaatt ggttgacact tttcctcatc tgtagagaaa aaaggtaggc ctggggcaca cttaggagga ctaaaataaa cgcagacctc gtgggtgtga gggagttggc atttgcggtc ggttgacaca cagtgtgatg cccaaaatcc agcattattc</pre> | aaatgaccta ggttgtggga tcaatactgt gcgatgtggt cttactaact ggctacactg gttggttatc tatggaaccc acgtarggag actcagattt tttcactgca | caaattctta ggctgcagaa ctaaagaatg acagagagta tggacattcg gtgaaatgag attaataata aatatcctag tgttgtatgg tatgcagcca tttgtatcaa | gaagtgtaaa agcagagaga tactctccaa acaggttttg aaagttatgt atcatgaagc gttattatca tagatgagta agtcagacca ggttactgct gataatggcg | gaactaaaaa gactaattca acttcacatc gagtcagatg agtcacttat taaaatgccc gttgtagata agagagggtt accaaacaaa ggctctggat caaccatccc | 60 120 180 240 300 360 420 480 540 600 660 720 780 |

```
gtacacagtc aattcctggg gatgcaaatg atgatttctt ccttttttt ttgagacgga
                                                                      840
gttttgctct tgttgcccag gctggagtgc agtggcacta tatcggctcc ccacaacctc
                                                                      900
cgcctctggg gttcaagcga ttctcctgcc tcagtctctc gag
                                                                      943
<210> 1635
<211> 1120
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (68)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (133)
<223> n equals a,t,g, or c
<400> 1635
cttgctttgg cctcccaggc atgagccacc atgccaagct gttttctctg ttttatcctg
                                                                       60
gaatctcnat gggcctcagc ttagcaattg tgagggtggg tatgcaggag gtggggtgtg
                                                                      120
aggaggggct ggnaagcaac ctttagaagc aggtctgaag ggacttgtca ggggttcccc
                                                                      180
aggtaggaaa taggggtcac ctgtgccccc agcccacctg ccattgaggt gctagcccc
                                                                      240
agaggetgtt atetttgtat agatgetggg ggeateagga eageetgaaa eaetgtttee
                                                                      300
aggagtacag catagaaaat aagtctttcc atccaaattg gaaatgaaaa ggccctggta
                                                                      360
cttgacagat ctactccagt gacttggaac actgtgtggg agacttgtcc ttggcagcag
                                                                      420
tagaaatggg gcggctctga actttctctc tgtaacccca ggcacatgtg tgcagacttg
                                                                      480
                                                                      540
ccaggccctg tgggcmaagc ggatgtagga cctggctctt atccgggcat ttggtaactc
gaggaaaatg gactttteet ettetgetge ttttgttttt acetttgggg eettateatt
                                                                      600
tgtggcatct gccctctagg acctatagct tttgggactg ctggtagaca cctattctac
                                                                      660
tagcagagtt ttttccccca aggcaggtgt tttgatgagg gcttgggtca cagcctcggg
                                                                      720
actcatggct gctctgtatc ttccatcctg ctggcctgga ccacacggtt ccatgacttt
                                                                      780
gccagattcc ttggcaggtt tcattaagag agatgcacag gccggacgtg gttgctcaca
                                                                      840
cctgtaatcc cagcactttg ggaggctgaa gcaatcagat ctcttgagct caggagttcg
                                                                      900
agaccagcct gggcaacatg gcaaaacccc atctctacaa aaaatacaaa aattagccca
                                                                      960
cgtggtggca cacacccgtg gtcccagcta cttgggaggc tgaggtaggg gttgagccct
                                                                     1020
aggggttgag gctgcaggaa gccatgatag ttcccctgca cacttcagcc tgggtgacag
                                                                     1080
agcaagaccc tgtctcaaaa aaaaaaaaaa aaaactcgag
                                                                     1120
<210> 1636
<211> 402
<212> DNA
<213> Homo sapiens
<400> 1636
ggcacgagca tttgcacaca cagccacaaa cttgcacaag cagcacttgt acactgacac
                                                                       60
atatccgttt gtgcctatac agtgcacact tacacatttg cacacagctg tgcttgctca
                                                                      120
cacatttgca cacacccacc tacacacttg cacacatact acacacttga gcgtgcagca
                                                                      180
cacataccta tgtgcataca tgcacatttg cacatgcaca cagcagtggc acacacttct
                                                                      240
ctatcactct ccctagtcac tgttctcccc tgtgattccc accctctga ccgccctgc
                                                                      300
teactigetg eccetteac tggaagggge etggeetggt geeetgtete tgtetgtete
                                                                      360
caccgtgcag ggaggtttca caaggactgg ctgatgtctc gc
                                                                      402
<210> 1637
<211> 214
<212> DNA
<213> Homo sapiens
<400> 1637
ggcacgagcg gcacgagtgt atgtgtccct ccaaaattca tctgttgaaa cctaagaccc
                                                                       60
```

```
aatgtgacag ttttaagatg tgggaccttt tgggaagtga taagtcccqa tqqctctqcc
                                                                       120
cacatgaatg tattagtgag tgcccttgta acagggctgg agagtactat ctacqtaggc
                                                                       180
cctctttgcc ttttttttt ttttttcct ttct
                                                                       214
<210> 1638
<211> 570
<212> DNA
<213> Homo sapiens
<400> 1638
ggcacgaggt cgcatgggca gccctggggc tctgttagct ctcctcccgt cccttctccc
                                                                        60
tttttcctgg ggcctgggtc cctggccact actgtcctca cccaagacgt aggcggccac
                                                                       120
caacttttgt cccagggaga cgtgcaggac ttgaggcagc tggctgcaga gttcgtccgg
                                                                       180
gagtgggagc agcaggaagg ccacagacac aatccccgtc agcaagaaga ggaggaagga
                                                                       240
gctggtggcc agttgctggc gggggtctga gaaacaagac tcatcagatg ctgcagcccc
                                                                       300
cactcctgcc cagcccaggt cctccaggga gaagcctgaa caaggaagat gtatctactt
                                                                       360
ttttttttt aattatcttt tattttttgt agagatggag tcatcactac gttgtccagg
                                                                       420
ctggtctgga actcttggcc tcaggtgatc ctcctgcctt agcttcctaa gtagctggga
                                                                       480
ctatgggttc atgctaccat gcctggctaa tttttaagtt gtttgtagat ggtcttgcta
                                                                       540
tgttgtccaa gctgatcttg aactcctggc
                                                                       570
<210> 1639
<211> 1811
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (5)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1024)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1127)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1160)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1728)
<223> n equals a,t,g, or c
<400> 1639
ggcanagttt tctgctaatt ctaaaataca tgtcatatct cagtctgatt ctaatgagtg
                                                                       60
ctttgtctct tcaggctgtg ttttttcttg ccttttagtg tgccttgcaa ttttttgttg
                                                                      120
aaagttgggc atgttgtaat tggttataga aatttaagta actaggcctc tagtttaagg
                                                                      180
atttatgttc atctgggtag gagttagtct ttgtttaatg tttactgtag ctatagatgc
                                                                      240
cagagactic cgcttcctct catgtcctaa tttttatctc ccttttgact tctagcttct
                                                                      300
ctaagtattc ctcatcagaa agagtttatt tcttgcattt cttttatcyg taatccatta
                                                                      360
tcatgctccc ggaaccctgt aggtctggag gtaaggcgtg agaacattct ataatattcc
                                                                      420
agttcaattg taatctttta gtagtctggg tctttgsctg gtgaccttca caaacattta
                                                                      480
ttcttttttt ttttttgaga caaagtctca ccatgttgcc cagcctggag tgcaatggtg
                                                                      540
```

| | tcactgcaac | | | | | 600 |
|---------------------|--------------------------|------------|------------|------------|------------|------------|
| | gggatttcag | | | | | 660 |
| | tgaagtgaga | | | | | 720 |
| | tcataagagt | | | | | 780 |
| | gtttctcttc | | - | | | 840 900 |
| | attgatttct | | | | | 960 |
| | tttaagtttg | | | | | 1020 |
| | aagtccatgg | | | | | 1020 |
| _ | ttcactgaca aggtaggtag | _ | _ | | | 1140 |
| | tttgscttgn | | | | | 1200 |
| | ttggcttttt | | | | | 1260 |
| _ | aaacttaagg | | | | | 1320 |
| | ttagcwttcc | | | | | 1380 |
| | cttgtccttt | | | | | 1440 |
| _ | cattgatcat | | | | | 1500 |
| gtatgctgtg | tttgctttat | tgcttcttt | cctgctttct | actctattgg | ttgcattttc | 1560 |
| ttctgacttt | aaagttatac | tttcattttt | ttttcttctg | gaggttacac | caggccaatt | 1620 |
| agggctcata | actaaattta | tttttcttta | ttaattttta | agtttctata | gcctatcttc | 1680 |
| cttctgaatt | aaagaagtat | ttttgcacac | ctttaaccct | cagccacntc | tggcttacca | 1740 |
| tgaccacctt | ctacccacca | tcccctcggt | attatgtgtt | ggtattctcc | aggattaagt | 1800 |
| tcagactcga | g | | | | | 1811 |
| | | | | | | |
| <210> 1640 | | | | | | |
| <211> 462 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1640 | | | | | | |
| | cagctttagt | tactaatacc | cacatcatat | catagaatta | tacaddtata | 60 |
| | aaacttagag | | | | | 120 |
| | ctctatgtca | | | | | 180 |
| - | caaatgacca | | | | | 240 |
| | atttgtaccc | - | | | | 300 |
| | ctccctggag | | | | | 360 |
| | cttgtagccc | | | | | 420 |
| ctgaacactc | cagttccctg | gacttttctc | atatgatatg | ta | | 462 |
| _ | | | | | | |
| <210> 1641 | | | | | | |
| <211> 534 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| .400 555 | | | | | | |
| <400> 1641 | | | | | | C 0 |
| | aattcatgaa | | | | | 60 120 |
| | tgttgattac | | | | _ | 180 |
| | gtgtttcctg acagaataca | | | | | 240 |
| | aaagtgccag | | | | | 300 |
| | agttcttgcc | | | | | 360 |
| | tctccatgat | | | | | 420 |
| | gtataatgta | | | | | 480 |
| | atcccaagga | | | | | 534 |
| | | 3 33- | 3- | 5 - 555 | | |
| <210> 1642 | | | | | | |
| <211> 1011 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <220> <221> SITE | | | | | | |
| | | | | | | |

```
<222> (383)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (925)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (948)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (976)
<223> n equals a,t,g, or c
<400> 1642
agcaaaaaga tacacgggcc taagataaaa gatcaactaa acgtctcgta aagcctctaa
                                                                        60
                                                                       120
acagggcagg aaagcctggg ccaacgtgga gatgttacat caaaggcagc agcagctcag
                                                                       180
tgatcctcac acacagtggg ctgaagttaa aaaaagcaga gtcatcagtg gttcacaatt
                                                                       240
tacattataa ttgtaattta ttatttgcat gtatagttat attagtttat gctttgtttg
atatttcatg tttaccatat ctttatttga aatatagtaa atatttattt ctatacatat
                                                                       300
                                                                       360
ttggaaaaaa tatattctga acaacttttt cttaatgcta gcatccctgg tgttgtggca
cttttcagaa taaaccctag canggtcaag atgattggca ttagccttct tctttaatca
                                                                       420
tctcaaacca ttgttccctt tgcttactat agtctttctg tgtttgcctc cttttcattt
                                                                       480
                                                                       540
cttactctaa actctttcct gccatagcct ttgcatttgc tattcccttt gtctggaatg
                                                                       600
ttcttgccat gactctgcat agtggcttta ctgacacata tctacaacac ataatttgta
                                                                       660
cagagateta aatatttttt ccagatttac atteaatgac etttgtataa cagatattte
                                                                       720
tattatatca agtactgtgt tatctacttg gaaatattgt cctatcttaa ctttgccact
                                                                       780
tgtcaattaa ttaatatcat tgccatttga ggagtggagg aatttcagag tggcttagtg
awtgcacaaa gtcatacagc taataaacaa caatgccagg gtttgaaccc agggtttctg
                                                                       840
                                                                       900
artttggatc tcttttgcat taatctctga catcactcat gcttttgcct ttctgtatcc
agcagtctct cctatctatt tttantaata atcaatggta gtttttgnaa attgtactcc
                                                                       960
tgtgtaactg aakgcnttta akgctttaat ttgmacttgt aataatcatt g
                                                                      1011
<210> 1643
<211> 1665
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1004)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1010)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1122)
<223> n equals a,t,g, or c
<400> 1643
                                                                       60
ggcacgaggg aaaagttaga aatataataa tgttagacct taagagtagg acccacgaaa
gttgcaaaca cttctagcct tattattcac atacctctca tgaagtttct tggttcttga
                                                                       120
ctctttctat tgctaccggt tacaacttat gaaaatatta catattgaca tggcatgagt
                                                                       180
```

| ttttactatc | gttaagccca | aaagctttct | cccgctgctt | caactctaaa | gaatgatcac | 240 |
|---|--|--|---|--|---|---|
| | tgcattgact | | | | | 300 |
| | ggccattcac | | | | | 360 |
| | cgtaagtgat | | | | | 420 |
| | ctagactaaa | | | | | 480 |
| | gctaacttca | | | | | 540 |
| | gaagacttct | | | | | 600 |
| | ccaaaaaata | | | | | 660 |
| | | | | | | 720 |
| | tcagcatgta agccaagttg | | | | | 780 |
| | | | | | | 840 |
| | tattaagcgt | | | | | 900 |
| | attcagggag | | | | | 960 |
| | ttttctggga | | | | | 1020 |
| | gttctgggct | | | | | 1020 |
| | caactctgaa | | | | | 1140 |
| | acacctcaca | | | | | 1200 |
| | ttggtgtgga | | | | | |
| | aatgtggcaa | | | | | 1260 |
| | aatggaaaga | | | | | 1320 1380 |
| | cacaacagta | | | | | |
| | ctgaaaaccc | | | | | 1440 |
| | cgctttttga | | | | | 1500 |
| | acccatatag | | | | | 1560 |
| | aatctataaa | | | | gctaagaaaa | 1620 |
| cattttcaca | caataaagaa | gagtaaagtc | tggaatgatc | tcgag | | 1665 |
| 010 1614 | | | | | | |
| <210> 1644 | | | | | | |
| <211> 963 | | | | | | |
| <212> DNA | • | | | | | |
| < 2713> Homo | sapiens | | | | | |
| <213> Homo | 2 ap 2 3 1 1 2 | | • | | | |
| | 2 WP = 0-1-2 | | • | | | |
| <400> 1644 | | | | - h h | | 60 |
| <400> 1644 attgggtacg | ggcccccct | | | | | 60 |
| <400> 1644 attgggtacg agagggcaga | ggcccccct tggccaggag | cagagccaga | tggggagcaa | cagccttccc | tctgccagga | 120 |
| <400> 1644 attgggtacg agagggcaga cagggagaga | ggcccccct tggccaggag cctggctgcc | cagagccaga tcacagtgag | tggggagcaa aggtctggca | cagccttccc gccagggagg | tctgccagga gcactgggga | 120 180 |
| <400> 1644 attgggtacg agagggcaga cagggagaga caagggccca | ggcccccct tggccaggag cctggctgcc gccgggcacc | cagagccaga tcacagtgag ctacggagca | tggggagcaa aggtctggca catgacccc | cagcettece gecagggagg acetgtecat | tctgccagga gcactgggga ggagcacacg | 120 180 240 |
| <400> 1644 attgggtacg agagggcaga cagggagaga caagggccca acctccacct | ggcccccct tggccaggag cctggctgcc gccgggcacc ccagctgccc | cagagccaga tcacagtgag ctacggagca ctgtgctgca | tggggagcaa aggtctggca catgacccc gacaactccc | cagcettece gccagggagg acetgtecat agggtggega | tctgccagga gcactgggga ggagcacacg gggtggcatc | 120 180 240 300 |
| <400> 1644 attgggtacg agagggcaga cagggagaga caagggcca acctccacct ctgatcccag | ggcccccct tggccaggag cctggctgcc gccgggcacc ccagctgccc cagcgcctgc | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga | tggggagcaa aggtctggca catgacccc gacaactccc acctgctgcc | cagcettece gccagggagg acetgtecat agggtggcga cacccaccc | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg | 120 180 240 300 360 |
| <400> 1644 attgggtacg agagggcaga cagggagaga caagggcca acctccacct ctgatcccag ctctcccttc | ggcccccct tggccaggag cctggctgcc gccgggcacc ccagctgccc cagcgcctgc cttgcccaac | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct | tggggagcaa aggtctggca catgacccc gacaactccc acctgctgcc caatgcctgc | cagcettece gccagggagg acetgtecat agggtggega cacecacece tcagggergg | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc | 120 180 240 300 360 420 |
| <400> 1644 attgggtacg agagggcaga cagggagaga caagggccca acctccacct ctgatcccag ctctcccttc | ggcccccct tggccaggag cctggctgcc gccgggcacc ccagctgccc cagcgcctgc cttgcccaac tgaggagagaga | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat | tggggagcaa aggtctggca catgacccc gacaactccc acctgctgcc caatgcctgc taggggcctt | cagcettece gccagggagg acetgtecat agggtggega cacecacece tcagggergg gctgatectt | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct | 120 180 240 300 360 420 480 |
| <400> 1644 attgggtacg agagggcaga cagggagaga caagggccca acctccacct ctgatcccag ctctcccttc agaggagggg ccatgtccct | ggcccccct tggccaggag cctggctgcc gccgggcacc ccagctgccc cagcgcctgc cttgcccaac tgaggagaga atccctcatg | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat caaagcacta | tggggagcaa aggtctggca catgacccc gacaactccc acctgctgcc caatgcctgc taggggcctt acctggaggc | cagcettece gccagggagg acetgtecat agggtggcga cacccaccce tcagggergg gctgatectt ggagcattte | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct atcgaagcaa | 120 180 240 300 360 420 480 540 |
| <400> 1644 attgggtacg agagggcaga cagggagaga caagggcca acctccacct ctgatcccag ctctcccttc agaggagggg ccatgtccct agcatctcct | ggcccccct tggccaggag cctggctgcc gccgggcacc ccagctgccc cagcgcctgc cttgcccaac tgaggagaga atccctcatg gccaccaagc | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat caaagcacta acgtccacgg | tggggagcaa aggtctggca catgacccc gacaactccc acctgctgcc caatgcctgc taggggcctt acctggaggc tgttggggat | cagcettece gccagggagg acetgtecat agggtggcga cacccaccce tcagggergg gctgatectt ggagcattte tgattgette | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct atcgaagcaa tatcctccag | 120 180 240 300 360 420 480 540 |
| <400> 1644 attgggtacg agagggcaga cagggagaga caagggcca acctccacct ctgatcccag ctctcccttc agaggagggg ccatgtccct agcatctcct cccactctc | ggcccccct tggccaggag cctggctgcc gccgggcacc ccagctgccc cagcgcctgc cttgcccaac tgaggagaga atccctcatg gcaccaagc | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat caaagcacta acgtccacgg ccgtgtgaca | tggggagcaa aggtctggca catgacccc gacaactccc acctgctgcc caatgcctgc taggggcctt acctggaggc tgttggggat ggcgcgcgc | cagcettece gccagggagg acetgtecat agggtggcga cacccacce tcagggergg gctgatectt ggagcattte tgattgette tgggcaacga | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct atcgaagcaa tatcctccag ggataagaaa | 120 180 240 300 360 420 480 540 600 660 |
| <400> 1644 attgggtacg agagggcaga cagggagaga caagggcca acctccacct ctgatcccag ctctcccttc agaggagggg ccatgtccct agcatctcct agcatctcct agcatctcct agcatctcct agagaagggg | ggcccccct tggccaggag cctggctgc gccgggcacc ccagctgccc cagcgcctgc cttgcccaac tgaggagaga atccctcatg gccaccaagc ggagcaccca cacgacatgt | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat caaagcacta acgtccacgg ccgtgtgaca gcgcctgaga | tggggagcaa aggtctggca catgacccc gacaactccc acctgctgcc caatgcctgc taggggcctt acctggaggc tgttggggat ggcgcgcgc agtcacagac | cagcettece gccagggagg acetgtecat agggtggega caccacce tcagggergg gctgatectt ggagcattte tgattgette tgggcaacga tcagaeggga | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct atcgaagcaa tatcctccag ggataagaaa gacaggctcg | 120 180 240 300 360 420 480 540 600 660 720 |
| <400> 1644 attgggtacg agagggcaga cagggagaga caagggcca acctccacct ctgatcccag ctctcccttc agaggagggg ccatgtccct agcatctcct cccactctac atgaataggc ataccacaca | ggcccccct tggccaggag cctggctgc gccgggcacc cagctgccc cagcgcctgc cttgcccaac tgaggagaga atccctcatg gccaccaagc ggagcaccca cacgacatgt ccaaggtctg | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat caaagcacta acgtccacgg ccgtgtgaca gcgcctgaga gatgcacaca | tggggagcaa aggtctggca catgacccc gacaactccc acctgctgcc caatgcctgc taggggcctt acctggaggc tgttggggat ggcgcgcgc agtcacagac ggacactgag | cagcettece gccagggagg acetgtecat agggtggega caceacece tcagggergg gctgatectt ggagcattte tgattgette tgggcaacga tcagaeggga taactectge | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct atcgaagcaa tatcctccag ggataagaaa gacaggctcg agggtgagcg | 120 180 240 300 360 420 480 540 600 660 720 780 |
| <pre><400> 1644 attgggtacg agagggcaga cagggagaga caagggccca acctccacct ctgatcccag ctctcccttc agaggagggg ccatgtccct agcatctcct cccactctac atgaataggc ataccacaca ggtttccagg</pre> | ggcccccct tggccaggag cctggctgc gccgggcacc ccagctgccc cagcgcctgc cttgcccaac tgaggagaga atccctcatg gccaccaagc ggagcaccca cacgacatgt ccaaggtctg gcactcgaca | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat caaagcacta acgtccacgg ccgtgtgaca gcgcctgaga gatgcacaca accggcagag | tggggagcaa aggtctggca catgacccc gacaactccc acctgctgcc caatgcctgc taggggcctt acctggaggc tgttggggat ggcgcgcgc agtcacagac ggacactgag tctggaagca | cagcettece gccagggagg acetgtecat agggtggega caccacce tcagggergg gctgatectt ggagcattte tgattgette tgggcaacga tcagaeggga taactectge gectggaggg | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct atcgaagcaa tatcctccag ggataagaaa gacaggctcg agggtgagcg gaaagggcat | 120 180 240 300 360 420 480 540 600 660 720 780 840 |
| <pre><400> 1644 attgggtacg agagggcaga cagggagaga caagggcca acctccacct ctgatcccag ctctcccttc agaggagggg ccatgtccct agcatctcct cccactctac atgaataggc ataccacaca ggtttccagg tcctgacggg</pre> | ggcccccct tggccaggag cctggctgc gccgggcacc cagctgccc cagcgcctgc cttgcccaac tgaggagaga atccctcatg gccaccaagc ggagcaccca cacgacatgt ccaaggtctg gcactcgaca ggcaccaag | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat caaagcacta acgtccacgg ccgtgtgaca gcgcctgaga gatgcacaca accggcagag aagcaaaggc | tggggagcaa aggtctggca catgacccc gacaactccc acctgctgcc caatgcctgc taggggcctt acctggaggc tgttggggat ggcgcgcgc agtcacagac ggacactgag tctggaagca ccagtggcat | cagcettece gccagggagg acetgtecat agggtggcga caccacce tcagggergg gctgatectt ggagcattte tgattgette tgggcaacga tcagaeggga taactectge gcetggaggg gaaagaccaa | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct atcgaagcaa tatcctccag ggataagaaa gacaggctcg agggtgagcg gaaagggcat ggagtgtga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| <pre><400> 1644 attgggtacg agagggcaga cagggagaga caagggcca acctccact ctgatcccag ctctcccttc agaggagggg ccatgtccct agcatctcct accactctac atgaataggc ataccacaca ggtttccagg gggaacagag</pre> | ggcccccct tggccaggag cctggctgc gccgggcacc ccagctgccc cagcgcctgc cttgcccaac tgaggagaga atccctcatg gccaccaagc ggagcaccca cacgacatgt ccaaggtctg gcactcgaca | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat caaagcacta acgtccacgg ccgtgtgaca gcgcctgaga gatgcacaca accggcagag aagcaaaggc | tggggagcaa aggtctggca catgacccc gacaactccc acctgctgcc caatgcctgc taggggcctt acctggaggc tgttggggat ggcgcgcgc agtcacagac ggacactgag tctggaagca ccagtggcat | cagcettece gccagggagg acetgtecat agggtggcga caccacce tcagggergg gctgatectt ggagcattte tgattgette tgggcaacga tcagaeggga taactectge gcetggaggg gaaagaccaa | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct atcgaagcaa tatcctccag ggataagaaa gacaggctcg agggtgagcg gaaagggcat ggagtgtga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 |
| <pre><400> 1644 attgggtacg agagggcaga cagggagaga caagggcca acctccacct ctgatcccag ctctcccttc agaggagggg ccatgtccct agcatctcct cccactctac atgaataggc ataccacaca ggtttccagg tcctgacggg</pre> | ggcccccct tggccaggag cctggctgc gccgggcacc cagctgccc cagcgcctgc cttgcccaac tgaggagaga atccctcatg gccaccaagc ggagcaccca cacgacatgt ccaaggtctg gcactcgaca ggcaccaag | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat caaagcacta acgtccacgg ccgtgtgaca gcgcctgaga gatgcacaca accggcagag aagcaaaggc | tggggagcaa aggtctggca catgacccc gacaactccc acctgctgcc caatgcctgc taggggcctt acctggaggc tgttggggat ggcgcgcgc agtcacagac ggacactgag tctggaagca ccagtggcat | cagcettece gccagggagg acetgtecat agggtggcga caccacce tcagggergg gctgatectt ggagcattte tgattgette tgggcaacga tcagaeggga taactectge gcetggaggg gaaagaccaa | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct atcgaagcaa tatcctccag ggataagaaa gacaggctcg agggtgagcg gaaagggcat ggagtgtga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| <pre><400> 1644 attgggtacg agagggcaga cagggagaga caagggcca acctccacct ctgatcccag ctctcccttc agaggagggg ccatgtccct agcatctcct accactctac atgaataggc ataccacaca ggtttccagg tcctgacggg gggaacagag gcc</pre> | ggcccccct tggccaggag cctggctgc gccgggcacc cagctgccc cagcgcctgc cttgcccaac tgaggagaga atccctcatg gccaccaagc ggagcaccca cacgacatgt ccaaggtctg gcactcgaca ggcaccaag | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat caaagcacta acgtccacgg ccgtgtgaca gcgcctgaga gatgcacaca accggcagag aagcaaaggc | tggggagcaa aggtctggca catgacccc gacaactccc acctgctgcc caatgcctgc taggggcctt acctggaggc tgttggggat ggcgcgcgc agtcacagac ggacactgag tctggaagca ccagtggcat | cagcettece gccagggagg acetgtecat agggtggcga caccacce tcagggergg gctgatectt ggagcattte tgattgette tgggcaacga tcagaeggga taactectge gcetggaggg gaaagaccaa | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct atcgaagcaa tatcctccag ggataagaaa gacaggctcg agggtgagcg gaaagggcat ggagtgtga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 |
| <pre><400> 1644 attgggtacg agagggcaga cagggagaga caagggcca acctccact ctgatcccag ctctccttc agaggagggg ccatgtcct agcatctcct accactctac atgaataggc ataccacaca ggtttccagg tcctgacggg gggaacagag gcc</pre> <210> 1645 | ggcccccct tggccaggag cctggctgc gccgggcacc cagctgccc cagcgcctgc cttgcccaac tgaggagaga atccctcatg gccaccaagc ggagcaccca cacgacatgt ccaaggtctg gcactcgaca ggcaccaag | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat caaagcacta acgtccacgg ccgtgtgaca gcgcctgaga gatgcacaca accggcagag aagcaaaggc | tggggagcaa aggtctggca catgacccc gacaactccc acctgctgcc caatgcctgc taggggcctt acctggaggc tgttggggat ggcgcgcgc agtcacagac ggacactgag tctggaagca ccagtggcat | cagcettece gccagggagg acetgtecat agggtggcga caccacce tcagggergg gctgatectt ggagcattte tgattgette tgggcaacga tcagaeggga taactectge gcetggaggg gaaagaccaa | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct atcgaagcaa tatcctccag ggataagaaa gacaggctcg agggtgagcg gaaagggcat ggagtgtga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 |
| <pre><400> 1644 attgggtacg agagggcaga cagggagaga caagggcca acctccact ctgatcccag ctctcccttc agaggagggg ccatgtcct agcatctcct accactctac atgaataggc ataccacaca ggtttccagg tcctgacggg gggaacagag gcc <210> 1645 <211> 1573</pre> | ggcccccct tggccaggag cctggctgc gccgggcacc cagctgccc cagcgcctgc cttgcccaac tgaggagaga atccctcatg gccaccaagc ggagcaccca cacgacatgt ccaaggtctg gcactcgaca ggcaccaag | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat caaagcacta acgtccacgg ccgtgtgaca gcgcctgaga gatgcacaca accggcagag aagcaaaggc | tggggagcaa aggtctggca catgacccc gacaactccc acctgctgcc caatgcctgc taggggcctt acctggaggc tgttggggat ggcgcgcgc agtcacagac ggacactgag tctggaagca ccagtggcat | cagcettece gccagggagg acetgtecat agggtggcga caccacce tcagggergg gctgatectt ggagcattte tgattgette tgggcaacga tcagaeggga taactectge gcetggaggg gaaagaccaa | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct atcgaagcaa tatcctccag ggataagaaa gacaggctcg agggtgagcg gaaagggcat ggagtgtga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 |
| <pre><400> 1644 attgggtacg agagggcaga cagggagaga caagggcca acctccact ctgatcccag ctctcccttc agaggagggg ccatgtcct agcatctcct accactctac atgaataggc ataccacaca ggtttccagg gggaacagag gcc <210> 1645 <211> 1573 <212> DNA</pre> | ggcccccct tggccaggag cctggctgcc gccgggcacc ccagctgccc cttgcccaac tgaggagaga atccctcatg gccaccaagc ggagcaccca cacgacatgt ccaaggtctg gcactcgaca ggcaccagag agcacctgaca | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat caaagcacta acgtccacgg ccgtgtgaca gcgcctgaga gatgcacaca accggcagag aagcaaaggc | tggggagcaa aggtctggca catgacccc gacaactccc acctgctgcc caatgcctgc taggggcctt acctggaggc tgttggggat ggcgcgcgc agtcacagac ggacactgag tctggaagca ccagtggcat | cagcettece gccagggagg acetgtecat agggtggcga caccacce tcagggergg gctgatectt ggagcattte tgattgette tgggcaacga tcagaeggga taactectge gcetggaggg gaaagaccaa | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct atcgaagcaa tatcctccag ggataagaaa gacaggctcg agggtgagcg gaaagggcat ggagtgtga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 |
| <pre><400> 1644 attgggtacg agagggcaga cagggagaga caagggcca acctccact ctgatcccag ctctcccttc agaggagggg ccatgtcct agcatctcct accactctac atgaataggc ataccacaca ggtttccagg tcctgacggg gggaacagag gcc <210> 1645 <211> 1573</pre> | ggcccccct tggccaggag cctggctgcc gccgggcacc ccagctgccc cttgcccaac tgaggagaga atccctcatg gccaccaagc ggagcaccca cacgacatgt ccaaggtctg gcactcgaca ggcaccagag agcacctgaca | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat caaagcacta acgtccacgg ccgtgtgaca gcgcctgaga gatgcacaca accggcagag aagcaaaggc | tggggagcaa aggtctggca catgacccc gacaactccc acctgctgcc caatgcctgc taggggcctt acctggaggc tgttggggat ggcgcgcgc agtcacagac ggacactgag tctggaagca ccagtggcat | cagcettece gccagggagg acetgtecat agggtggcga caccacce tcagggergg gctgatectt ggagcattte tgattgette tgggcaacga tcagaeggga taactectge gcetggaggg gaaagaccaa | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct atcgaagcaa tatcctccag ggataagaaa gacaggctcg agggtgagcg gaaagggcat ggagtgtga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 |
| <pre><400> 1644 attgggtacg agagggcaga cagggagaga cagggcca acctccact ctgatcccag ctctccttc agaggagggg ccatgtcct agcatctcct accactctac atgaataggc ataccacaca gtttccagg tcctgacggg ggaacagag gcc <210> 1645 <211> 1573 <212> DNA <213> Homo</pre> | ggcccccct tggccaggag cctggctgcc gccgggcacc ccagctgccc cttgcccaac tgaggagaga atccctcatg gccaccaagc ggagcaccca cacgacatgt ccaaggtctg gcactcgaca ggcaccagag agcacctgaca | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat caaagcacta acgtccacgg ccgtgtgaca gcgcctgaga gatgcacaca accggcagag aagcaaaggc | tggggagcaa aggtctggca catgacccc gacaactccc acctgctgcc caatgcctgc taggggcctt acctggaggc tgttggggat ggcgcgcgc agtcacagac ggacactgag tctggaagca ccagtggcat | cagcettece gccagggagg acetgtecat agggtggcga caccacce tcagggergg gctgatectt ggagcattte tgattgette tgggcaacga tcagaeggga taactectge gcetggaggg gaaagaccaa | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct atcgaagcaa tatcctccag ggataagaaa gacaggctcg agggtgagcg gaaagggcat ggagtgtga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 |
| <pre><400> 1644 attgggtacg agagggcaga cagggagaga caagggcca acctccact ctgatcccag ctctccttc agaggagggg ccatgtcct agcatctcct accactctac atgaataggc ataccacac gtttccagg tcctgacggg gggaacagag gcc <210> 1645 <211> 1573 <212> DNA <213> Homo <400> 1645</pre> | ggcccccct tggcaggag cctggctgcc gccgggcacc cagcgctgc cttgcccaac tgaggagaga atccctcatg gcaccaagc ggagcaccca cacgacatgt ccaaggtctg gcactcgaca ggagcactgaca gcactcgaca ggcactcgaca ggcactgaca ggcacttgg | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat caaagcacta acgtccacgg ccgtgtgaca gcgcctgaga gatgcacaca accggcagag aagcaaaggc tgttgggcg | tggggagcaa aggtctggca catgaccccc gacaactccc acctgctgcc caatgcctgc taggggcctt acctggaggc tgttggggat ggcgcggcgc | cagcettece gecaggagg acetgtecat agggtggega cacecacece teagggergg getgateett ggageattte tggattgette tgggeaacga teagaeggga taacteetge geetggaggg gaaagaecaa gtggagetgg | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct atcgaagcaa tatcctccag ggataagaaa gacaggctcg agggtgagcg gaaagggcat ggagtgttga agccgctcgt | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 963 |
| <pre><400> 1644 attgggtacg agagggcaga cagggagaga caagggcca acctccact ctgatcccag ctctccttc agaggagggg catgtcct agcatctcct cccactctac atgaataggc ataccacac gtttccagg tcctgacggg ggaacagag gcc <210> 1645 <211> 1573 <212> DNA <213> Homo <400> 1645 ggcacgagtg</pre> | ggcccccct tggcaggag cctggctgcc gccgggcacc cagcgctgcc ttgcccaac tgaggagaga atccctcatg gcaccaagc ggagcaccca cacgacatgt ccaaggtctg gcactcgaca ggacactgaca ggagcactgaca gagcactgaca gagcactgaca gagcactgaca ggagcactcgaca agcagcttgg | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat caaagcacta acgtccacgg ccgtgtgaca gcgcctgaga gatgcacaca accggcagag aagcaaaggc tgttgggcg | tggggagcaa aggtctggca catgaccccc gacaactccc acctgctgcc caatgcctgc taggggcctt acctggaggc tgttggggat ggcgcggcgc | cagcettece gecaggagg acetgtecat agggtggega cacecacece teagggergg getgateett ggageatte tggattgette tgggeaaegga teagaeggga taacteetge geetggaggg gaaagaceaa gtggagetgg | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct atcgaagcaa tatcctccag ggataagaaa gacaggctcg agggtgagcg gaaagggcat ggagtgttga agccgctcgt | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 963 |
| <pre><400> 1644 attgggtacg agagggcaga cagggagaga caagggcca acctccact ctgatcccag ctctccttc agaggagggg catgtcct agcatctcct accactctac atgaataggc ataccacac gtttccagg tcctgacggg ggaacagag gcc <210> 1645 <211> 1573 <212> DNA <213> Homo <400> 1645 ggcacgagtg tttactttga</pre> | ggcccccct tggcaggag cctggctgcc gccgggcacc cagcgctgcc cttgcccaac tgaggagaga atccctcatg gcaccaagc ggagcaccca cacgacatgt ccaaggtctg gcactcgaca ggagcactgaca gagcactgaca gagcactgaca gagcactgaca gagcactcgaca ggcacagcag agcattgg | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat caaagcacta acgtccacgg ccgtgtgaca gcgcctgaga gatgcacaca accggcagag aagcaaaggc tgttgggcg | tggggagcaa aggtctggca catgaccccc gacaactccc acctgctgcc caatgcctgc taggggcctt acctggaggc tgttggggat ggcgcggcgc | cagcettece gecaggagg acetgtecat agggtggega cacecacece teagggergg getgateett ggageatte tggattgette tgggeaacga teagaeggga taacteetge geetggaggg gaaagaceaa gtggagetgg | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct atcgaagcaa tatcctccag ggataagaaa gacaggctcg agggtgagcg gaaaggcat ggagtgttga agccgctcgt | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 963 |
| <pre><400> 1644 attgggtacg agagggcaga cagggagaga caagggcca acctccact ctgatcccag ctctccttc agaggagggg catgtcct agcatctcct ccactctac atgaataggc ataccacac gtttccagg tcctgacggg ggaacagag gcc <210> 1645 <211> 1573 <212> DNA <213> Homo <400> 1645 ggcacgagtg tttactttga aagattttaa</pre> | ggcccccct tggcaggag cctggctgcc gccgggcacc cagctgccc cagcgctgc cttgcccaac tgaggagaga atccctcatg gcaccaagc ggagcaccca cacgacatgt ccaaggtctg gcactcgaca ggcactcgaca ggcactcgaca ggcactcgaca agcattgtc taagtcttg | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat caaagcacta acgtccacgg ccgtgtgaca gcgcctgaga gatgcacaca accggcagag aagcaaaggc tgttgggcg | tggggagcaa aggtctggca catgaccccc gacaactccc acctgctgcc caatgcctgc taggggcctt acctggaggc tgttggggat ggcgcgcgc agtcacagac ggacactgag tctggaagca ccagtggcat gcatcagcgg | cagcettece gecaggagg acetgtecat agggtggega cacecacece teagggergg getgateett ggageatte tggattgette tggacacga teagaeggga taacteetge geetggaggg gaaagaceaa gtggagetgg | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct atcgaagcaa tatcctccag ggataagaaa gacaggctcg agggtgagcg gaaaggcat ggagtgttga agccgctcgt | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 963 |
| <pre><400> 1644 attgggtacg agagggcaga cagggagaga caagggcca acctccact ctgatcccag ctctccttc agaggagggg catgtcct agcatctcct ccactctac atgaataggc ataccacac gtttccagg tcctgacggg ggaacagag gcc <210> 1645 <211> 1573 <212> DNA <213> Homo <400> 1645 ggcacgagtg tttactttga aagattttaa tgaccctcc</pre> | ggcccccct tggcaggag cctggctgcc gccgggcacc cagctgccc cagcgctgc cttgcccaac tgaggagaga atccctcatg gcaccaagc ggagcacca cacgacatgt ccaaggtctg gcactcgaca ggcactcgaca ggcactcgaca ggcactcgaca agcatttgc taagtcttc tagggaagc ctaccttct | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat caaagcacta acgtccacgg ccgtgtgaca gcgcctgaga gatgcacaca accggcagag aagcaaaggc tgttgggcg | tggggagcaa aggtctggca catgaccccc gacaactccc acctgctgcc caatgcctgc taggggcctt acctggaggc tgttggggat ggcgcgcgc agtcacagac ggacactgag tctggaagca ccagtggcat gcatcagcgg | cagcettece gecaggagg acetgtecat agggtggega cacecacece teagggergg getgateett ggageatte tggatgete teagaeggga teagaeggga teagaeggg gaaagaecaa gtggagetgg ctttettggg ataategttt egtteteag gegggagetg | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct atcgaagcaa tatcctccag ggataagaaa gacaggctcg agggtgagcg gaaaggcat ggagtgttga agccgctcgt gcctttccct tgataggaa aattccagtt gaactgaaga | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 963 |
| <pre><400> 1644 attgggtacg agagggcaga cagggagaga caagggcca acctccact ctgatcccag ctctccttc agaggagggg catgtcct agcatctcct ccactctac atgaataggc ataccacac gtttccagg tcctgacggg ggaacagag gcc <210> 1645 <211> 1573 <212> DNA <213> Homo <400> 1645 ggcacgagtg tttactttga aagattttaa tgaccctcc</pre> | ggcccccct tggcaggag cctggctgcc gccgggcacc cagctgccc cagcgctgc cttgcccaac tgaggagaga atccctcatg gcaccaagc ggagcaccca cacgacatgt ccaaggtctg gcactcgaca ggcactcgaca ggcactcgaca ggcactcgaca agcattgtc taagtcttg | cagagccaga tcacagtgag ctacggagca ctgtgctgca aggactggga cccaggagct aaggagtcat caaagcacta acgtccacgg ccgtgtgaca gcgcctgaga gatgcacaca accggcagag aagcaaaggc tgttgggcg | tggggagcaa aggtctggca catgaccccc gacaactccc acctgctgcc caatgcctgc taggggcctt acctggaggc tgttggggat ggcgcgcgc agtcacagac ggacactgag tctggaagca ccagtggcat gcatcagcgg | cagcettece gecaggagg acetgtecat agggtggega cacecacece teagggergg getgateett ggageatte tggatgete teagaeggga teagaeggga teagaeggg gaaagaecaa gtggagetgg ctttettggg ataategttt egtteteag gegggagetg | tctgccagga gcactgggga ggagcacacg gggtggcatc ctgccacttg aataaraggc cgtggcgcct atcgaagcaa tatcctccag ggataagaaa gacaggctcg agggtgagcg gaaaggcat ggagtgttga agccgctcgt gcctttccct tgataggaa aattccagtt gaactgaaga | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 963 |

```
360
gctctggaac tgattgctcc caggatctcc tgccagccca gctggcctgg ccccaqctt
cacctctggg accccagctg ctctaagccc aggatctctt tccccaagga cccagccctc
                                                                      420
gcctctgcga gaatgaacat atttgataga ttttcttaac aagttagaaa attcagctcc
                                                                      480
ttctgtcctg gagctagcaa agacttgtgt gatgcctccg aaggggctct gagttctggg
                                                                      540
gtgggagttt tgctctctgt caggtgtgat aaaatgttga accctcccca ccaccacttt
                                                                      600
ttttttttta aaccagggat gtctgttgaa ataaaacatt cagtctgaca aacattgcct
                                                                      660
gccctgtccc tggatttgtg tttaccttgt gtaaagcacc ttccaaatga tcttgagctg
                                                                      720
cctgattgct ttgctatttt tcctctctat ccaccatcta gctgggtttg tggccattgg
                                                                      780
aaaccctaga aatggtatgc acaactttat atgaggcagg atgattttca gagaggcctg
                                                                      840
tgatcccaaa tatgtattgc caatctcagg tacctctgga gactgggtga agtcaggagg
                                                                      900
                                                                      960
ttttttctgt agtacaaaat agtgtcaggc ataaaaatcc tatccagcag gaggtaaagt
ggcaaaatcc ctgtccctga agatgattca gattgacgct ggtagtcact ggtctggatc
                                                                     1020
agtttggaag cttcacattg aacttgggtg ctagagagat acccttggag acttccagag
                                                                     1080
ccctagcctt cattgaagaa aggagtacag ggtctgtaga ctccaattat ctgtaaggca
                                                                     1140
ctgtgacgcc cagaagtggc aagacggatg ggatgattcc aaaaacagtg tgcaaatcat
                                                                     1200
actgcaaacc accactgaaa aatatggcta agggtactag gatccagtag ggcttagctg
                                                                     1260
ctgtggtttc ctgcaggaaa gtagcgttga ggaaactcct gcagagaagg caggagtgtg
                                                                     1320
gtgtgggaaa tgtgatgaat aaaagcactg gaaagactac agctggctac catcaataat
                                                                     1380
gaagagaaca cagaagagtt gcatgctcag aatctaggga ctccaggatt tctgaggtgc
                                                                     1440
                                                                     1500
tgttgtgccc acacctcaaa aatgtgctga gccaggtccc agcttgaaac aatgaactaa
                                                                     1560
ccggggccgg gtatagtggc tcatgcctgt aatcccagca ctttggcagg ccaaggccag
ggtaggtgga tca
                                                                     1573
<210> 1646
<211> 1361
<212> DNA
<213> Homo sapiens
<400> 1646
                                                                       60
ggcacgagct cgtgccgctg acataggaca ggaatgagcc ttagtatctt tgccatgacc
agttgttggt acgtggcctc accacaaaca cagtgatgga tttcagagcc cagcagctga
                                                                      120
ggccgatggt cagttatgct ctcatggtta aaggtcttcc aggcacattc tcatgacagc
                                                                      180
                                                                      240
cacgatatat ttttgtaaga aattctacca aggcaaaata tgattaagat aggtagccaa
                                                                      300
aacaaacaaa aaagaaagaa aagccgcaaa ttcctccctg cttgctcttt atgcatgctc
ctttgcaatg tgattttgct attagctcca tcaagagatg ggtctcctga atctgagctt
                                                                      360
gaccacgtga attgctttga ccactggagc attcacaaac atggcacaac ggaggcttga
                                                                      420
aaaatgcatg tgccttggga cttgccctct cttgttactt ttggaaccag agacctccat
                                                                      480
gcaatgagcc tagactagcc tcctagaaga tgaggacaag aagaagcaga aatcaagcac
                                                                      540
cttcccacca ccaggcatgt gagtgaggcc atcctagact gtccagcccc agccaagctg
                                                                      600
tcagtgacca cagagaccag ctaagccaaa ctaaaaccga aaggactgtg ggaaaaccta
                                                                      660
tagtactgtg agaaaccata aatgcttgtt gttttaattc actcagtttt gggacagtgt
                                                                      720
gttatgtagt aaaaactaat tgatatcatt tatgtccatt ttatagatgg aggaactgaa
                                                                      780
acctggagac atgagaaagc ccctcaatga atggaagtct caaggtgttc attggtcttc
                                                                      840
ctcagagcct cctacagcaa gctgggcttg atcggaaggc tctgagtttg ggggtagctt
                                                                      900
tactcatttg tgttatttgc ctaaaccctg gagtctactg agatcgagac ccccgaattt
                                                                      960
gatcattaat aaatctcttt tggatgaata atataaaggt gttaggaggc ccttctaggc
                                                                     1020
cattgaagcc actagaacag aagtcaagga attctcaatc ttcaaagcat gggaaatgag
                                                                     1080
gggtacaggg attctcccta gcccagttag aaactccttc aggcaggacg taaaatttat
                                                                     1140
atttctcttc tattcttctt cactactgtg ctagtcttat aagtctattg ttcattcatt
                                                                     1200
caacaaatac ttattgagtg tgccaagaaa aaagcaaaga tctttgccct catagagttt
                                                                     1260
actttctagg agggaaatag aaaataagca gaataaataa gagaaatata tggtgtacca
                                                                     1320
gataatgatg tgtgctagga attaaaaaaa aaaaaaaaa a
                                                                     1361
<210> 1647
<211> 1043
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (927)
```

<223> n equals a,t,g, or c

| <400> 1647 | | | | | | |
|------------|------------|------------|------------|------------|------------|------|
| | cgagtttcca | tatetteeet | agctatttgc | actttatott | ctataassa | 60 |
| | gccactgctg | | | | | 120 |
| | | | | | | 180 |
| | ccctgactga | | | | | 240 |
| | aacaatgtgg | | | | | |
| | ccaggcagag | | | | | 300 |
| | atgaacttct | | | | | 360 |
| | cacatcctac | | | | | 420 |
| | ctcctgggag | | | | | 480 |
| | ctcctggtgc | | | | | 540 |
| | gccccgtttc | | | | | 600 |
| | ctcctgggag | | | | | 660 |
| | gccttttccc | | | | | 720 |
| tagccagagt | gtgactgtgt | gctgagtcct | gtaacactga | atcacctcag | gatgatcttg | 780 |
| gggaccctta | acacatgcct | ggtccagtct | tttgctttct | ttttttgaga | cagggtctca | 840 |
| ttctgtctgg | ctagagtgta | gtggtgtgat | cacagctgac | tgcagcctca | acatcctagg | 900 |
| ctcaagtgag | cctcccaact | cagcctncct | gagtagccag | gaacacaggc | acaggccacc | 960 |
| acaccccagc | taatgtttaa | aatgtttcat | ggagacagga | tctcgctatg | ttgtccaggc | 1020 |
| tggtcttgaa | ctcctggcct | cga | | | | 1043 |
| | | | | | | |
| <210> 1648 | | | | | | |
| <211> 1113 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1648 | | | | | | |
| ggcacgagct | gctcttaacc | taaaactaaa | tacacaaaat | gtggcgtcaa | aaaacccttt | 60 |
| acttcacttt | cctattaaat | gtctcgttta | gcctgtactt | ttccttttcg | ctttggtact | 120 |
| tttttacacc | atgcccccac | ccccatcccc | ccacccctac | tctcgcgctt | cccaacgcca | 180 |
| ccaagattgt | cttgataaga | actccaggtt | ctcccacgaa | ccgttctgat | actattaatt | 240 |
| aaaagcagtg | gcctcaggca | gagggctcag | gaagtaggga | gggcgcgggc | ccgcgcgcac | 300 |
| | aaaaggtctt | | | | | 360 |
| tccgcaccca | tgtcctggta | catgaaacca | tcaccaaacg | cgaacgggaa | gtgtcctctt | 420 |
| | tgctgctggg | | | | | 480 |
| tcgcaaccgc | ggtggcaccc | acgccggagt | ccttacctcc | ccgcgcgggc | tcaatcagtg | 540 |
| | cccaccctta | | | | | 600 |
| | catgcagttc | | | | | 660 |
| | ccactcgtat | | | | | 720 |
| ttaaatttaa | tctatagctg | agctactcgc | tcctccaact | cacccagtgg | accagtgttt | 780 |
| | gcgaaacaac | | | | | 840 |
| | atgttttatg | | | | | 900 |
| | ggctcggcca | | | | | 960 |
| | ctcgggttta | | | | | 1020 |
| | ctttcaaaaa | | | | | 1080 |
| | tcggagctct | | | | | 1113 |
| | | | | | | |
| <210> 1649 | | | | | | |
| <211> 495 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1649 | | | | | | |
| ggcacgagct | tgccttgtgg | cactggcagc | agcagccaac | cacagtggca | gatgcagatg | 60 |
| agaaatgtca | atggggctac | agggatgtgg | agatgcaggg | gctattgggc | ccctgggcag | 120 |
| aatgcaatct | ggtggctggc | tctcaaaatg | gtactgtgct | gtagctgctt | agggctcggg | 180 |
| | gacccagcat | | | | | 240 |
| gaagctcctc | atgttagtct | cagggcctgt | gagggttgag | gagcattccc | attgatagga | 300 |
| | cttcaatgga | | | | | 360 |
| agaaacctct | ctgcgctccc | agctaatcct | ggctgaccac | gatgcctggc | ttcctgtcct | 420 |
| | | | | | | |

| tccttggcct aaaaaaaaaa | tggatgtttc aaaaa | ctgtcacttc | tctgtttaat | gcaaaaaaaa | aaaaaaaaa | 480 495 |
|---------------------------------------|--------------------------|------------|------------|------------|------------|--------------------|
| <210> 1650 <211> 1099 <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1650 | tctctggctt | aaaataaaca | agtatgatag | 224442422 | tanaanataa | 60 |
| gtctgaaaac | tgaggtgatc | acttgaattc | ctatatgtga | aatgctgtgc | tccctgtcac | 120 |
| | actgtttgcc | | | | | 180 |
| | acataatttg gaaagaggga | | | | | 240 300 |
| | cagagatgtc | | | | | 360 |
| | tatgggggaa | | | | | 420 |
| | aaatttaggc | | | | | 480 |
| | acgcataacc | | | | | 540 |
| | atctatttga ggtccttgga | | | | | 600 660 |
| | tatagagtca | | | | | 720 |
| attagctaac | gaacaaatgc | agatgacttc | attatggttg | catatcagaa | attaaaatgt | 780 |
| | ggtcaggctt | | | | | 840 |
| | atcacctgag taaaaataca | | | | | 900 960 |
| | ggctgaggca | | | | | 1020 |
| | accactgcac | | | | | 1080 |
| aaaaaaaaa | aaaaaaaa | | | | | 1099 |
| <210> 1651 | | | | | | |
| <211> 670 | | | | | | |
| <212> DNA <213> Homo | anniona | | | | | |
| | sapiens | | | | | |
| <400> 1651 | 22254444 | ataataaata | +20200000 | ~~~~ | | 60 |
| | aaatggcaga tttgttcttt | | | | | 60 120 |
| | aacacagcca | | | | | 180 |
| ctttgaaagc | tccagtggaa | ccaaggaaaa | agtttacacc | cttctaagac | tacccccggc | 240 |
| | aggtcaacac | | | | | 300 |
| | agacctcctt ttacatttcc | | | | | 360 4 20 |
| | ccataacgtc | | | | | 480 |
| agctaccact | tccctcaata | gggctctcct | ctctccccag | ctggacgtaa | gcattttcgc | 540 |
| | acctcttccc | | | | | 600 |
| gtacaggete | atgtgtatac | tegtettate | cttgatcctt | gtctcccacc | ctctatcaga | 660 670 |
| | | | | | | 070 |
| <210> 1652 <211> 1360 | | | | | | |
| <211> 1300 <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1652 | | | | | | |
| | ccagtgctta | | | | | 60 |
| | cctcccagca atgggtctcc | | | | | 120 |
| | aggctgcagg | | | | | 180 240 |
| tacacatgcc | gtgactgawt | atgttgtgtt | ctgaaaatat | ttgggagtta | atttgtgttt | 300 |
| tgtgcctagt | gcttcmygga | ccggtgctca | ttgcatcctt | acagccatct | acaagggtgt | 360 |
| caccattatt | tgtattttat | tagacttaga | gaggtgaagt | gacttgctca | aaataatacg | 420 |

| gttagcaaat | gactgaaccc | cgacccaaca | gggagaatgt | gggaagaaat | caacaaagct | 480 |
|------------------------|------------|------------|-----------------|------------|------------|------|
| | gtatctgcca | = | | | | 540 |
| | ccatcagagg | | | | | 600 |
| | gtggcaagag | | | | | 660 |
| | | | | | | 720 |
| | gtgtagagtg | | | | | 780 |
| | tttaaagcgc | | | | | |
| | ctccaccatc | | | | | 840 |
| | ccacttttga | | | | | 900 |
| | cagcagtgcc | | | | | 960 |
| | tttactcacc | | | | | 1020 |
| ttttaaatgc | cgcttcaaag | ccaacaagga | gcagaaccag | tgctgattcg | tgtttatgat | 1080 |
| aatgacattt | gaaaggctaa | aaattacaaa | gttgtttaca | gagatggact | tagaaaataa | 1140 |
| ttgtatctaa | tgtctcataa | acataaaaga | aagttatttt | gtggtagatg | attgaaaaga | 1200 |
| aaaaatctcc | tttaaaaagg | aaataaatat | actagtttya | gacagaaaca | acttcaaagg | 1260 |
| | attcagtgga | | | | | 1320 |
| | taaaagcatt | | | J | | 1360 |
| | | | 3 3 3 3 3 5 3 3 | | | |
| <210> 1653 | | | | | • | |
| <211> 840 | | | | | | |
| <211> 040 <212> DNA | | | | | | |
| | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1653 | | | | | | |
| | acgtgtttgc | | | | | 60 |
| gtgcctgttt | gcctgcgtgc | gtatgtacac | gtttgcctgt | gtgcacgtct | gcacgtgtgt | 120 |
| ttgcctgtgt | gcatatttgt | ctgtgtgtgt | gcacatctgc | atgtacatgg | gtcctgtcat | 180 |
| tgctgcccgt | ctcctcccga | gagctttctc | tgcacgttgg | ccctgccttt | gcagcttctg | 240 |
| ccagccccgt | ggcgccgagt | ggccttcttc | ccagccccag | tgggcgcagt | ggggtgggcc | 300 |
| gtcctctgag | ggcacccgag | ctgctgcatc | tcccgtcttc | ccgcatgcag | tcctcagggc | 360 |
| | gagccccatt | | | | | 420 |
| | tgcgtccgta | | | | | 480 |
| | cctcagagtc | | | | | 540 |
| | gtggcggggt | | | | | 600 |
| | gaacatggct | | | | | 660 |
| | gcgtgtccct | | | | | 720 |
| | | | | | | 780 |
| | ctcctagcaa | | | | | 840 |
| geeeeeee | gttggcctct | gratecerre | aggettettaa | ggeeeeteet | Cacatectec | 840 |
| -010- 1654 | | | | | | |
| <210> 1654 | | | | | | |
| <211> 1590 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1654 | | | | | | |
| - | tgtttgtctc | - | | | | 60 |
| | agaatttaag | | | | | 120 |
| attctgtgta | aagccagcaa | actaaccagc | agcctcagaa | attttatggt | tctttctatt | 180 |
| gacagtctaa | ggtcctccct | ggttaccatt | tccccaaaag | aacaatgagg | aatttggagg | 240 |
| ttatgcattc | tcgcagtctg | gggatctgtg | atagtcactc | tgttaggtgt | ttttgagcca | 300 |
| | catagcagct | | | | | 360 |
| | caccactcca | | | | | 420 |
| | tgggtcctta | | | | | 480 |
| | gacagtgagg | | | | | 540 |
| | tctcaggatg | | | | | 600 |
| | aaggaagatc | | | | | 660 |
| | caactttaga | | | | | 720 |
| | gggcagtcac | | | | | 780 |
| | | | | | | 840 |
| | gccaacagcc | | | | | |
| | gcacatgtcc | | | | | 900 |
| | catggcaaag | | | | | 960 |
| ttttcctggg | ggtcaggaag | ctgtcaagga | tgaggaggtt | gtatagcaga | tgtccaggaa | 1020 |
| | | | | | | |

<220>

```
1080
ggagaggttc cccaggaaga agtacatggg tgtgtgcagg cgggagtcaa ggatggtcac
caggatgagg accccgttgc ccagcaggat caccaggtac accagcagga tgaacacaaa
                                                                     1140
                                                                     1200
gaatgtcttc tccagctatg ggtgggcaga gaggcccagg agaacgaacc ccaacacagg
ggaggcctca ttggacctgt tcatggtgca tctgctctgt cacctggagg aactcagagg
                                                                     1260
tcaacctcag catcctctta ctccaaaagt acctggaagg ccaggcacaa atccttgccc
                                                                     1320
tgctgagcaa ctggagaata gcgctgatga tttgttcatc tctatggggt tctaggaaca
                                                                     1380
atgtagtaca ggtcaatatt taacttctgc ttctggtaag aacaaacagg ctaatttgga
                                                                     1440
                                                                     1500
ctaactgtct tgcagatgac cattagacaa actggaaaaa atacataaaa cattggagaa
gtaataagac aatgaggaac atagggttat gactctgggg aaaaacaagg acctagagat
                                                                     1560
                                                                     1590
gtaagtctag cacttgtggc tgtgattcaa
<210> 1655
<211> 177
<212> DNA
<213> Homo sapiens
<400> 1655
ggcacgagtg ggctgtgtac gtgtttgtgc catttttatg actgggaaaa tgacagtgat
                                                                       60
gatgaggatt cctagttcta ttgttactaa taccgctatg gagtctgaag tgccaggttt
                                                                      120
                                                                      177
taaaacccag gtgtatcgct cattagctgt gtgaccttga gcaagatctt caacctc
<210> 1656
<211> 1014
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (930)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (949)
<223> n equals a,t,g, or c
<400> 1656
agggataacc tgtcatctac atttgaaaat taatgaacaa ttctcgttac atagataata
                                                                       60
tttttcagtg acagtcgtat ttttttctgt gggagggtgc acatttatat tcatgaaatt
                                                                      120
ttagtttcca gctttgaact ggcacccttg ttaaaaattc tgatttttt tttttttaa
                                                                      180
actctgggga ttttacttaa caggttctga aaggcttgga ggctataaca ttctcacatt
                                                                      240
ggaaattcct tactaggaat tacttagttt gaacttagaa tgatgatgaa cttttgggac
                                                                      300
ttaaatatac tataactttt gtcactagga tcaggaatat tcagagtgtg aagtcaagtg
                                                                      360
agtggtgtaa tcaaagagtc tgaaaagaac catgagacat catgtagcag tcttgccttt
                                                                      420
aggcagtaat gtattaaagc tactttgctt attctttgaa aggaacatct ctagagaagt
                                                                      480
tccaaagtca tccttggtga tatctttcaa tgatgcagaa atcttagtca agaaattagg
                                                                      540
aagtcttccc taaatataca ttctgaatcc ttcctgatgt gatagtttat ttgccccttt
                                                                      600
tcatgctctt actagcaata agagtaagcc gctcaaatgt cactcatctt ttcatatctc
                                                                      660
tgaataatgt gtttcctttc ttttttaatt taaaggatgt tcactaaaca aagttttggg
                                                                      720
gaacaccaga aaagtagaaa gaacaaaaaa gataataccc actggtattg cactatccaa
                                                                      780
atatgtaatc actgctaaca attcctgtgc atttttaaaa cttacaggcg cgagcactgc
                                                                      840
                                                                      900
gcctggccac attttcatat tactatggta tcctttctca aggactcatg gtaccctgtc
cacttttatc ttattaaagg gaaattgtgn taatataatg gacgtctgnt tttgcatgtt
                                                                      960
gaagtggtca catatgcctg taatgtggtg ctagtgtttc tgtcccaaac agtg
                                                                     1014
<210> 1657
<211> 1270
<212> DNA
<213> Homo sapiens
```

```
<221> SITE
<222> (155)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (752)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (767)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (835)
<223> n equals a,t,g, or c
<400> 1657
ggcacgagaa aaatcagaaa agaaaattaa aattccccac caatgataac agccattggt
                                                                        60
atttttacat gcatccttct gagttttatt agtcccatgt atatataaag aaaagttgga
                                                                       120
atgtacttta cagccagctt tatatgctgc ttttntctct agctcttata aatgcttatt
                                                                       180
tataagcatt ttctcaacat aaattacttt tgaaggtttc atttgatggc cacgatatgc
                                                                       240
catcacaatt atttttcagt cataatttat gtagctgatc ttcattgtta cacacatgga
                                                                       300
tgttccccac catgtggctg ccataaatga ttctccgatg accaactcta cacatagatc
                                                                       360
cttgtcttca tctctgatta tttccttatg atagatttct ggtctcatca ggtcaaagga
                                                                       420
tatgggcatt tttaaggctt tgatatgtgt tatgaaattg ccctcctgca aaggtggcct
                                                                       480
gggttccact ccccatgaag gctcaacagg tttctgaggc ctccctcaca cctccttcag
                                                                       540
catcttctct ctcactttcc tgcctcagcc tcttctccct gggttccctt gtgaaacaca
                                                                       600
atagtaaagg attatattat caaatattta attatgtatg tatctgaaaa tattttaaaa
                                                                       660
gtcaacataa ttactctatt tccattagtt tgatttgcag caaattatgc atttagtgtg
                                                                       720
aagttggagg tgcyttgctg gttggagygc anatagcgkt tggctgncta caatggggcg
                                                                       780
ggcgctggtg acaacagctc aggctggtaa agccgtatca ggtccttgca gaggnagggc
                                                                       840
ttcctcccag ctggggagcc tcagtacctt ggagctctga aatcacacca acaccacaaa
                                                                       900
tgaccctggg gactgggtgt cttagttatc tattcttgca taacaaacaa ccccaaaact
                                                                      960
tgtggttgct gaaaacaata aatatttact gtctcacagc ttctgtggga gctctccatc
                                                                      1020
cgtggccagc agctcaggct caggatctcc caagaagctg caatcaaggt ggccccatgg
                                                                      1080
ccgcagtcaa ctcaggcttg actcagggag aaagtatctg cctccaacct tactcacacg
                                                                      1140
atctctccaa agggctgctt caggacgtga cagctggctt ctccctgagc agacaattcc
                                                                      1200
agagaagcac tcaggtcggc acgcaaggtt ttcccatcct tttggcatag aagttagagc
                                                                      1260
ccagctcgag
                                                                      1270
<210> 1658
<211>, 1100
<212> DNA
<213> Homo sapiens
<400> 1658
ggcacgagat tacataaaaa caaacaattc tcccaccata ttttcagtac agctccgcta
                                                                       60
atgaacatcc tcaaatcata ccagacactc tgtatttatt tttctgatgt acttccctat
                                                                      120
aatctgtttc agattatttt tatttacaga aatgattttt tccaagattg ggaccaccaa
                                                                      180
gaaactacag atgcagacat acgtcatatc actcctctag tcctgaattt ataatattat
                                                                      240
ttaactcagt ttttcttttt acctgagaac aaataaacaa aaataacaaa caccatctcc
                                                                      300
caccaaaata atacaaacag caatgaaaaa cttttctaag tagctgtgag tcaaaaaggt
                                                                      360
gaaatttcat tgagctgcaa aactaatcca gcagttttag gatatgttca cgttttggta
                                                                      420
atttagatga ctatttctac atttccctat gatccaggat accaagggac ctgctgcctg
                                                                      480
agacgttgag atttagaggg ctttttctct gttacaatga ctcagagcaa atggagagag
                                                                      540
tgtccatttt tcatggatga tgatgcttgt aaattttcat tcatatcttt gataactgat
                                                                      600
gtacttagca acttccagat aacattggtt agagttagct ctgcttattt tggttctaat
                                                                      660
ttagaaggaa gacagagaaa atactcattc taagtaccta ctttttgtca gtaactatgg
                                                                      720
```

| tagctacttt | atgcactttg | tgtccatcag | ggttttccag | agaaacagaa | ataataggat | 780 |
|-------------------------|------------|------------|------------|------------|------------|------|
| | acacacacac | | | | | 840 |
| | aaaaaattca | | | | | 900 |
| | tgctaaatat | | | | | 960 |
| | tggatgggtg | | | | | 1020 |
| | ctgcctgagc | | | | | 1080 |
| | aaaaaaaaa | | | 333 | 33-3-3 | 1100 |
| | | | | | | |
| <210> 1659 | | | | | | |
| <211> 1473 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| -400× 16E0 | | | | | | |
| <400> 1659 | ~~~~ | a++aaaaaa | | | | 60 |
| | gaggttggct | | | | | 60 |
| | atgttgcctg | | | | | 120 |
| | gcggccaggt | | | | | 180 |
| | tggagttcct | | | | | 240 |
| | ggctgctggt | | | | | 300 |
| | tgctctacgc | | | | | 360 |
| | tcagcaccga | | | | | 420 |
| | gccggacccg | | | | | 480 |
| | gctggggcct | | | | | 540 |
| | gacgggaagg | | | | | 600 |
| | tccttgtcgt | | | | | 660 |
| | cacccagact | | | | | 720 |
| | caagcaatcc | | | | | 780 |
| | cctggctttt | | | | | 840 |
| aggctggtct | tgaactcctg | ggctcaagtg | atcttcccac | gtgggcctcc | caaaacgctg | 900 |
| | tgtgagccac | | | | | 960 |
| | tgttgtgtcc | | | | | 1020 |
| | gagtgtcctt | | | | | 1080 |
| | ccctggtggc | | | | | 1140 |
| | acaggcttac | | | | | 1200 |
| | gctctggttc | | | | | 1260 |
| | aaaggcctca | | | | | 1320 |
| | atgctttcac | | | | | 1380 |
| agccctgggc | ctggggatgt | ccccaatgct | gtacctggct | gaccccggat | taaaagcctc | 1440 |
| atccacgacc | gtgaaaaaaa | aaaaaaaaa | aaa | | | 1473 |
| <210> 1660 | | | | | | |
| <211> 1000 | | | | | | |
| <211> 1231 <212> DNA | | | | | | |
| <213> Homo | ganieng | | | | | |
| (213) Homo | Suprems | | | | | |
| <400> 1660 | | | | | | |
| ttcggcacga | gctcaaacac | attacgtgga | atgagggggg | agtgtatgaa | ggaatcatta | 60 |
| | agagtcccca | | | | | 120 |
| ccacctctcc | ccagagaggg | ctcagaaaaa | agatggcctg | gactctgctg | ggcagggtgg | 180 |
| | cccatgaatc | | | | | 240 |
| cagctttggc | atttctgggt | atgagggatg | caggagcagc | aagcttgatg | caaggggact | 300 |
| | cctctaaaca | | | | | 360 |
| | ggggtttagg | | | | | 420 |
| cacacataca | ttcttaaatt | ctcacatatt | tatagccctc | acatataaac | acagtgtctg | 480 |
| aaacacaaca | taagcctttg | caaaaatatg | cactagatag | ggaaggcctg | gaggatgccc | 540 |
| | gtgtccactt | | | | | 600 |
| | ttcctttctc | | | | | 660 |
| acacccagtc | agctgagctg | tttacacgta | gtgggctagc | ttgctcatgc | ttacctgctg | 720 |
| tgtcttctgt | tcatcagttc | tttctacttt | gttttacagt | ccattcgtgg | aactctagct | 780 |
| | gtttcataaa | | | | | 840 |
| | ttttctggga | | | | | 900 |
| | | | | | | |

```
cttcatgctc tcatctatgt gcccatctgt gcatattcct ccattttgta cctgtccatg
                                                                     960
cattettett acctetgaca ggaaatttee acattetaet ettgaateet eettaattta
                                                                    1020
gtacctgcag aatgtgccta acagatgctt gataccctaa attacagtca gataaggcag
                                                                    1080
gatgttaggg gtccatgatt ctttggggag attttttgca agtacatctt ccttcctaca
                                                                    1140
aaaggtaaaa aaaaaaaaa gcacccacag cgttcaagtt gaaataactc cagcccaatt
                                                                    1200
1260
aaaaaaactc gaggggggc ccggtaccca a
                                                                    1291
<210> 1661
<211> 582
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (297)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (335)
<223> n equals a,t,g, or c
<400> 1661
ggcacgaggc ggcggtggct gcggcggggc gcccgggtgc tcggtggcct ccgagtactt
                                                                     60
ggtgaaaacc agcggcacag cgatgtccgc tttgtccaac tggttccaga agcgggcgat
                                                                     120
gcagcaggcc ctcgtgatgc acggccacgc catgatgcta gctgaaaagc cggcctcctc
                                                                     180
tttcttcttg tggttctaaa gcaagtctct ataatcttcc ttcagcctcc gatcctgacg
                                                                    240
gccaatgtgg ttcccaccgt tttctacccc cgatcagccg gagctagttc gccctcntcc
                                                                    300
ctcagcgagc acccggggag actgtcctag gagantctgt agagtccctc gattaccggt
                                                                    360
cgcaaacgcc tttgggagcg cagtgtgmtg cgagcgccga agggtgagac gcacggcgtt
                                                                    420
cccgagtccc cggcgagggt gtctgggacg cgcccctccc tacggctgcg gcggcgcaca
                                                                    480
gacctcggtc gagcgaggcg acgtgaggag aggtggctac aggcttaagc catggcgcag
                                                                    540
aggagggcc gggcggtgtg gccgcagggt ccgcggaccg gg
                                                                    582
<210> 1662
<211> 1219
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (888)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (889)
<223> n equals a,t,g, or c
<400> 1662
ggcacgagca tgaagatgca aaactatgag ctgatttcat attttaaatg caagttagca
                                                                     60
aaatttacct tctacaatta tttgacaaga atttaaagtg caattgacaa acctttcaga
                                                                    120
aaaaagctgg gaattgggcc tttggggtaa ggttgccata tttagctaat taaacataca
                                                                    180
agtttcccag ttaaatttga atttcagata aatgatgtac aatatttggg acacacttat
                                                                    240
acaaaaatg ctcattgttt atctgaaatt ccaatttaac tgtgcatctg tattttgcct
                                                                    300
gggcatccta ctttggggta cttcgaggtc cctggctagc tcctggtcta tgtcttagtc
                                                                    360
catgctcaga agtcccatgt attcaaccag ctgcttcttc ctccattcca gtggttcttt
                                                                    420
tacaggtagg tgaggtctta aagaatcttt tgaaactttt gagccattcc ccaggagaat
                                                                    480
atctacatac aaaatttggc atctccaggg tatgtgggtc ccacgtgagc cccacccac
                                                                    540
aatggtcgga cccaaggact cctcccacag tccatggcac tgtgcagatg gccagctacg
                                                                    600
```

| aggaagtgag | catgttggac | tttgaggagt | tcaaccagac | tatgaaacag | caaaatcaca | 660 |
|------------|------------|------------|------------|------------|------------|------|
| agaccttttt | tgccttcttt | gccagttcca | aggacattgg | aggtaacaga | tatagcccca | 720 |
| atggcatgcg | ggccaaacca | gttgtagaga | cgggctgaag | catgttcggg | aagaatgtgc | 780 |
| attcatctac | tgccaagtag | gagaaaagcc | ttattggaaa | gatccaaata | atgtcttcag | 840 |
| gaaaaatttg | aaaggagctg | cagtgcttaa | ccatggaacc | caggaaannc | tgatagaatc | 900 |
| | | | | | tgatgatggc | 960 |
| agtcatgcct | tgatttcctg | ctctgttctg | gtaaactgca | tacttggttt | gaattcttgt | 1020 |
| tagcaataaa | taaataaatg | atgatgggct | gggcacagtg | gctcccgcct | gtaatcccag | 1080 |
| | | | | | acagcctggg | 1140 |
| | | tctacaaaaa | tatttaaaaa | ttagccaagc | gtggtggtgc | 1200 |
| atgcctatag | tcccagcta | 4 | • | | | 1219 |
| <210> 1663 | | | | | | |
| <211> 1543 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | - | | | | | |
| <400> 1663 | | | | | | |
| ggcacgagtg | taactgtata | atattgacaa | tcgaacaaac | agcttcaatc | atgtctattc | 60 |
| atatctccag | gcaaagtttt | gttcttcttc | ctttatttta | caaatgtatt | gcttcaaagg | 120 |
| acacatactt | ttgtggataa | acaatttcca | ctagaagaag | aacaggaaag | gtagctattt | 180 |
| | gttagagcca | | | | | 240 |
| | aaagatgatg | | | | | 300 |
| | aatatttagc | | | | | 360 |
| ttcagcataa | aaatggatat | attacacaga | gagtatacat | aggctcctaa | tgtctctgtg | 420 |
| tgcatttgta | tgcatattat | tcatctagta | ttttctttt | acttccaagt | tggaatgcat | 480 |
| ttacttcata | tcttattata | agcccatttg | gtaacacttc | tgtcagattt | cagttgcata | 540 |
| ttcactgttg | aataaatcag | tggttaataa | atgtccttgg | aaatgtgttt | agagataaat | 600 |
| aatgaactgc | tgtatctgat | cattaagtgt | acatcaagct | cacattttta | ctctcagaat | 660 |
| cctaaaagga | agatagcatg | acctactata | tatgtacatg | gaaaaaaggg | aaataattat | 720 |
| | tgtaaaagga | | | | | 780 |
| aataaatgtt | attacaactg | atcaaaaaat | cctactgcaa | aggaaataat | aaataaagat | 840 |
| ggagagtcaa | cctgtccatc | ataagtgctt | tttgttacaa | agccaaggac | ttggagtgtg | 900 |
| | cacagcatgc | | | | | 960 |
| accctctcat | aggcgcttcg | gagctgaccg | caggcacact | tttaatttgt | ggcaagatgg | 1020 |
| tctgacaaac | agcttgggag | gacagcacag | gtgaaaatac | agatcaagtg | cagataaaaa | 1080 |
| tatgttcacc | ttgaaaaata | caaacaagac | ttttaggtaa | taatgcacag | ggaaatccta | 1140 |
| tcaaaaaatg | agaagaatag | aaccactgct | ttctcattaa | caattttcac | aatccctttt | 1200 |
| agcttgtatt | ccaacttctg | tccataatcc | aatatctgca | tactccttac | atctatactt | 1260 |
| aaataatata | gatttttgtc | ccctgtacat | atcttataaa | tgtcaatcca | tcccacctca | 1320 |
| | gtattcagca | | | | | 1380 |
| atacttcaag | gtatcatccc | tataaaaagt | gaagaggat | ctgaggtcct | aaaaagaaaa | 1440 |
| acaacyacay | agaatggctg | caactccata | tgttcctgat | ggaaatctca | ctgctcagaa | 1500 |
| aaaaaaaaya | acacatatgc | Caaaataaaa | aaaaaaaaa | aga | | 1543 |
| <210> 1664 | | | | | | |
| <211> 817 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | • | | |
| <400> 1664 | | | | | | |
| gcttctaggc | ctgcggaatg | cacctctgct | gggctggggc | tctgagtttt | gtgttttggg | 60 |
| ccaacctgat | cctcatatat | ctatttggaa | ccagcgagtc | tccccagaat | attttatcaa | 120 |
| gttattttga | gttaggagtt | taatagacat | agaagccttt | aaggagagtg | agtaaatgaa | 180 |
| gttggcaagg | ggagtaggca | ggggagagag | gaggaaatcc | caggctaagt | tttggaagag | 240 |
| ggcttgatta | tgttggtgac | agcaggctgc | atcttccagg | acaggaatcc | ccccgtggtt | 300 |
| tacaaaacac | ttccccttac | ataatcctat | ttaattcaca | cgacaagccc | aagagttagg | 360 |
| garggttcat | tgccttatta | gcctgtgttt | acagatggtg | aaactgaggc | tcagagaggt | 420 |
| gctgagatca | cacagcagga | tcatgcagca | gaccacgggc | agggctggga | ttccggacca | 480 |
| agcttggcat | atatasata | gcaccacagt | attccctgca | agccctctgt | gttttccact | 540 |
| cctgagttag | argreacigg | rggrgetgta | yayyyggctg | ceggagcact | gtccttcatg | 600 |
| | | | | | | |

<213> Homo sapiens

```
660
tgaaaggggg ttccctttgc cctttttggg tgcccaccca caagcttctc tgtgctctgc
                                                                      720
ttcccttcgc tctccaagat gctaccttag agctactgga gccactttgt tcaggcagag
                                                                      780
ggctgtacgt gccctagggc tgatgtgccc ctggaaaggt ttgcagctaa ggactgcctg
gagcagggat atgaaagccc agctttcttg gctcgag
                                                                      817
<210> 1665
<211> 829
<212> DNA
<213> Homo sapiens
<400> 1665
ggcacgagaa ggcaggggcc ttgaatgaac aaacgaacct gactaggggc tacatgaaag
                                                                       60
                                                                      120
ccatactgtg cttcctcctc cttctcatga atccctttcc tcccttctct tttccatccc
                                                                      180
ccatagatca gaaatgtgaa ggcggttagg aaatgtccag actccaaaca gaaaaaactg
                                                                      240
tgatcctcag cagacacaag acataatatt ggattatttc cagcttcatc ctgggaaaaa
                                                                      300
tataggagac tgaagggaaa caggaaaata agtaaacacc catagaaaaa taaaatgtaa
                                                                      360
gataaaaaact gaaatgtaag aactatcaca tggtgagtgt ctatattcac tcataataga
gtaactacaa aatcataagt ttgatattta atcctaatgg gggtgaataa tttttttaaa
                                                                      420
tgttgctact gtcgtgataa aacaaattag ctacatactg acaaagtaaa agcgtgtttt
                                                                      480
ctaaaattga aataattctc aaaataacag tttagaaagg ctgcacattt tacaggaaat
                                                                      540
                                                                      600
gggttgaaca tcacatgatt tactcattaa ggagataatt attgagcgcc taaatgagga
aaaaagattt atagatttta aacaagcatc caattaacta aatattactg agtaaaagaa
                                                                      660
aaacaagtta atgatacttt tgtaccaatt ttattataaa atgtacgtga agaaaggcta
                                                                      720
                                                                      780
ttttgtcaaa ctgtttttcc gtatcatgtc atattttata tttacagcaa catcctgaaa
taggaatttc tgaggatatg cttcccattt gagagatgaa aacctcgag
                                                                      829
<210> 1666
<211> 783
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (743)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (752)
<223> n equals a,t,g, or c
<400> 1666
                                                                       60
aaaacttgga gctccaccgc ggtggccggc tgctctagaa ctagtggatc ccccgggctg
caggaattcg gcacgaggag gcaccgcaaa gatgcaagaa gtcacccgga gtacaaggac
                                                                      120
                                                                      180
aggacgccag gctttcaggg ggacgttgag gcagtcaaag gaaaaaaatg gcaaggcaga
                                                                      240
agaggagget gtggtactec accggaggec agtgeettee atgeateece tgeeeeggge
                                                                      300
ctgggggttg gtcgttgggt ccctggcttt cacccagggt gcgtgtctct ctcatggggg
gcagcccaaa gtgggaagaa gtcccctggg ggattgggat aagatgccaa gctttcagag
                                                                      360
                                                                      420
aaacgttgag gcatctcgga aaaaaaaagc agtgaggcca gaggagtctg gggtcctcca
ccagaggcca gtgccttctg ggcagcccct gcgttgggcc ttgggtggtt gtggagtccc
                                                                      480
                                                                      540
tggctttcac caagggtgcg tgtgtctccc acggggggca tccaaaaggg gcaagaagtc
                                                                      600
cactggggga tggggacaag atgtcaggct ttcaggggga cattgtggca gcccaaggaa
aaaagtgacg aggctgaara ggaarctcgg atcttccgyt graggccagt gccttccggg
                                                                      660
cagectttge gecaaktera ggggggeeeg yacceaatte geeetaaagg gageggatta
                                                                      720
                                                                      780
caatttaatt ggccgccgtt ttnaaaacgt cnggacttgg aaaaacccct ggggttaccc
                                                                      783
<210> 1667
<211> 578
<212> DNA
```

```
<400> 1667
ggcacgagct cataacaaag gccagaactg ttagaaacac acatacctcc ccacacacc
                                                                       60
aaaacctgaa catgtcatct tcctacttac aacccttcca tggcttccta ctgtggttgg
                                                                      120
attaagacca agaccettge gtggettata aggtetgeag gttttggete tgeeaacetg
                                                                      180
tctagcctcc tggccctctc aatcagcttg ctgtttccct catttgttac acaagtttca
                                                                      240
tttttaaaaa tgcatcatgg gctgtttcct cctcctggaa cattcttccc tccctttccc
                                                                      300
ctgacctgtc aatttctatt atccttcatt tccctgctta aatgtcactg tttttgagga
                                                                      360
agccttcaaa tccccagatt aggtcagaat cccctaacac actcactctt ttcgcacccc
                                                                      420
atacttaatt tttgtattat ttttctccaa gtgaacttaa ataaccatat aactgattaa
                                                                      480
aattgttctc ccctgccaga acaagaccca tgaggacagg agaccctttt gtcatggctt
                                                                      540
ctgtagcacc cggcatagtg cttggaatag aggagaca
                                                                      578
<210> 1668
<211> 1142
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (954)
<223> n equals a,t,g, or c
<400> 1668
ggcacgagca tagatatcat tccaattttt cctgttgcaa gtaacagaaa accagaccc
                                                                       60
atctggctga agccartaag agaaaagact aacaggaggg ccagcctcag gactcaaata
                                                                      120
cgtcaccagg acatgggttg cgtcccagtc tcagctctgc cagttcctgt agaacctcc
                                                                      180
ttccaaggtt cacagggtgg ctaccatagc ttcaggccct cacctcatga taagacagca
                                                                      240
atacaackgc catttcatgt ctgttgctgt ttctacattc agttagaatt aaataaattt
                                                                      300
tccagtagca cccacaaaaa tactgagtcc acctggttgg cctacctaga tatatcgcca
                                                                      360
gccctgatca agtcactggt cacgggcctg gattttctgg ttcgcttagg ctaatcatac
                                                                      420
gtcccatccc aggactgaag aagtaccagg gctgttgctg gagagtggct aatgtcccct
                                                                      480
ttacaaataa ggagctcatt gtttaggaag atgagcttgc caaaaatcac acacttgtaa
                                                                      540
aataagtcaa aatttgaact taagtctact tatctgagcc caaagtctta caaccattta
                                                                      600
tggctgttat cctaacacct acgtcgcgga acggaagagt cctaagactg caaagaccct
                                                                      660
tccttttctt ctagatccag tctaagttgg ttggtaattt ctttagaccc tgctttcagg
                                                                      720
gaagtttaaa aaaaattact tgcatttgta tattttcctt gtattttcgg ccaaatttct
                                                                      780
tctaattaaa gtacaacata agttgaacca acacaataat tgtcatatta agaaaagata
                                                                      840
aaacaaactt tactcatttc tgcttctggg catggagtgt gagggaccag acttaagttc
                                                                      900
tcaaacaact acaaaatcag accaaaaaat acaatggttt ccaggcaccg gacnacaggc
                                                                      960
agtgcagggc tgtgatcctt aagagaaggg aagcagcgag ccagagtatc caggccacaa
                                                                     1020
cccaaatgga ggccaagaga ggaacagcag aggatacaga gggagggttc caggggccaa
                                                                     1080
gacgcaatcc gaggggaagc ccttccgggg agagctggag tcctggggtg gccttctcqa
                                                                     1140
                                                                     1142
<210> 1669
<211> 2478
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (591)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (599)
<223> n equals a,t,g, or c
<220>
```

```
<221> SITE
<222> (1252)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1272)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1275)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1402)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1480)
<223> n equals a,t,g, or c
<400> 1669
ggcacgagtg acctttcaaa agttgatgaa taataaaaaa caattcatat gttctctctg
                                                                       60
tctcttatac tgtactttgt ttcacaaata tttccacagt tttcctggct caatcatttt
                                                                      120
                                                                      180
aattgcaaag gcaagattta tatatcataa attattacat taagcagtag aaatcagaaa
                                                                      240
tactgaggtg ggaaatatga actatccttg cataggaaca gctggaataa cctggtccaa
                                                                      300
aaatgtaata ataaaaacaa caaccaaaca tactgctcta ctgataattc agattttttt
                                                                      360
aagaaatcta atttttaaga aaaatcttgt tcaacttgcc agaagacaaa aatgatttga
aggttttaaa aagtgttcgg ttcattactg gatttgagct ggactcaatg tatctctact
                                                                      420
                                                                      480
attattgtta aagcagaatt atgtttacca caaaactaaa cagtttgcat gaccaataat
                                                                      540
gatttttaaa aaatgtttag ctatgaaact cttatgtggt tgtctcttga tatctagaga
                                                                      600
aagagaaggg aaaaaattat atttatcaat gttgagacat tagtttcatt ntacctaana
aaaatttaaa agaaaaacag ttacatagga attgttaagg agtttgtaga acactcactc
                                                                      660
                                                                      720
ccttcatatg cattgtagtt gggtatcact taaacatctc aactaagctg gatttctact
acagcggtct cctaagtcaa tcaggaaaat gttagttttt ttggttgctt taaatgaatg
                                                                      780
aatttctcct agcaaataga agcaatatga ttttaataaa cagtgatgaa gactctggga
                                                                      840
aacccttaca atgtagggta ataacatctt tctattaaaa acaataatgt tataaacatt
                                                                      900
                                                                      960
tcaacatcca aatgatggga catttcacat actcatgcct tttgattatt ttcaaagatg
cttcattacc taactcattc ttgtcacaga attcttgtag ctaaaagcaa aaatagactc
                                                                     1020
aaattgaaag atttttaaaa gataactact tggcagcaat tataggtgta tatacccttg
                                                                     1080
aagatacaaa gacttaataa taacacctga agaatatttc cctgccccct yccacacaca
                                                                     1140
cacacacaca cacacacaca aatactaggg aagtgtgctc ctcctcagat
                                                                     1200
cctccagctg tgggcttcct aattaaaagg ctgasctgtt tcctgctcaa ancmcttcaa
                                                                     1260
aagcettttt gntgntetee aettgeatat agttegeage aettgteett ettaeetgte
                                                                     1320
cattettatt tatagagage tttettgaat cagaaaccca agaagtgatg cagagmecat
                                                                     1380
tttattttat aaagttgaag gncaataata tttatgttaa aaaaaaatcc aagtagctga
                                                                     1440
attagcaact cagtaatttt gctagactgg caaaaaggan caatgcatgt ggcatagttt
                                                                     1500
                                                                     1560
ttaaaacata aatttttata gcataattta aaaacagtat ttattactgg ctgattttta
                                                                     1620
aaataaatgg gtattttcac ttgctgtaaa tgtgacatgt taaaatctat ttttaaaaaa
atactgagtt tgatattcat gtttaaagtt ggagactgtt gtaaaagtct gcctctgaat
                                                                     1680
ttgatatctt agacaaggaa tatttacctt ggtacaaatc aaatggatga gagatctaaa
                                                                     1740
cataaaatag tcaacagaat cgtcttttgt ggattcaaaa tagaaacggt wcaagtrgca
                                                                     1800
aacactgaca aatwgccctt tttaaaagcc caatctwaaa atcgacgtcc acaaaagctt
                                                                     1860
tcttttccaa gtatttgcct ataaagttat ttcaacacgg ctctgacaaa tgcctgtgtg
                                                                     1920
tcctgtccca tagggaaagg tgtgaacgca taacgttttg ctctttgcaa aaaagggtcg
                                                                     1980
ttaattgkcc gagagcascc accgtttagg gatgaaggga gattaagtga tttttggcca
                                                                     2040
atgcatctgc caattccctt cagggtagtc aagaatgggg gccggcagcc mtgctgcagt
                                                                     2100
tggaaggtct gtccaaaaaa ggccgttttg gagaaagagg gagagactgc gagtggccga
                                                                     2160
```

```
2220
ctgcgcccc ctcccagccc tccggcccgg gcgcctgagc cgccgctcac ctcggtgtca
ttgttraggt tccagaggtc caagcgcccc atcccgtcca cgcaggcaaa aarcscarga
                                                                     2280
                                                                     2340
tgcacggggg accacatgac atcgtacaca tagtctgcat tgtcttcaaa ggagtagagc
ggcttgttgt gctgtaaagc agagagaccg tgaagacttt gtggcgctgc tgctgcctcg
                                                                     2400
                                                                     2460
ggctgtctag agagcctaat taaaaacttt gcacattcac aaagtgtcat aaaacttccc
                                                                     2478
gagatgaaag tcctcgag
<210> 1670
<211> 1092
<212> DNA
<213> Homo sapiens
<400> 1670
ctgcaggaat tcggcacgag gttcatttca cttttcagaa aggagctggc tatcaccttg
                                                                       60
atttgctcat ggttggcgtt atgttgggag tttgctctgt catgggactt ccatggtttg
                                                                      120
tggctgcaac agtgttgtca ataagtcatg tcaacagctt aaaagttgaa tctgaatgtt
                                                                      180
ctgctccagg ggaacaaccc aagtttttgg gaattcgtga acagcgggtt acagggctaa
                                                                      240
tgatttttat tctaatgggc ctctctgtgt tcatgacttc agtcctaaag gtaaaatttc
                                                                      300
tttattgccg tgttttacaa tcttattata acatttatac ttagttatgt gaacatgaaa
                                                                      360
cattaaaata tacttaaaat acctaaaatt aggtttgttt tccacagttt actttggaaa
                                                                      420
                                                                      480
taatttcatt aggtttttag tatagcaagc atttcagtgg taagctgtat atattttaa
                                                                      540
aataatgtat accaggtgta gtggcttacg ccwgtaatcc cagcamttcg ggaggctgwk
                                                                      600
gcgggyagak cacttgcgsc cataagttcg agaccaacct ggctaacata gcgaaaccat
catctctacc aaaaacacaa aaattagctg ggcatggtgg cacgtgcctg tagtcccagc
                                                                      660
                                                                      720
tactcgggag gctgaggcca agaatcattt gaacccagga ggcagaggtt gcagtgagcc
aagatcatgt cactgcactc cagcctgggt gatggagtga gactctgtct caaaagaaaa
                                                                      780
                                                                      840
aagaaaaaaa aatgctagga aaaagaaata agaatgggaa aagctcatga aaattaaatc
                                                                      900
tataaatatc aaaataacta aaattttgta gtaataattt tcataagact gaagaccaat
                                                                      960
ataatgatat gaaaaaagga gaaaattttc tttaatagca agggggagga gggataagaa
tattagaaca aatccaaaag gtctgagatc tgtttagctg gagttgaaga aatttgtaac
                                                                     1020
                                                                     1080
agagacaaca gacgaaaagg gaagtaaaca ggggaagaaa attctcacag cagaaggcac
                                                                     1092
aggtttctcg ag
<210> 1671
<211> 846
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (22)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (823)
<223> n equals a,t,g, or c
<400> 1671
gatcactata aaaaaagcag gnacgcctgc aggtaccggt ccggaattcc cgggtcgacc
                                                                       60
cacgcgtccg acggctgcga gaagacgaca gaagggtacg gctgcgagaa gacgacagaa
                                                                      120
gggggagacc ggaagtgagt gatcgaaagc atggcgtcgg tggtgttggc gctgaggacc
                                                                      180
cggacagccg ttacatcctt gctaagcccc actccggcta cagctcttgc tgtcagatac
                                                                      240
                                                                      300
gcatccaaga agtcgggtgg tagctccaaa aacctcggtg gaaagtcatc aggcagacgc
caaggcatta agaaaatgga aggtcactat gttcatgctg ggaacatcat tgcaacacag
                                                                      360
cgccatttcc gctggcaccc aggtgcccat gtgggtgttg ggaagaataa atgtctgtat
                                                                      420
gccctggaag aggggatagt ccgctacact aaggaggtct acgtgcctca tcccagaaac
                                                                      480
acggaggctg tggatctgat caccaggctg cccaagggtg ctgtgctcta caagactttt
                                                                      540
                                                                      600
gtccacgtgg ttcctgccaa gcctgagggc accttcaaac tggtagctat gctttgatgt
                                                                      660
cctgttgagg ccatcggaca gagactggag cccaggtgac aggagatggt gataccagaa
gtcaagggtt ggggtggcga cacggcctcc cgaggaagag gtctgcttga tggtgactct
                                                                      720
```

| | | tgctgggaaa gaacgcatgc | | | | 780 840 846 |
|--|------------|---------------------------|------------|------------|------------|-------------------|
| <210> 1672 <211> 630 <212> DNA <213> Homo | sapiens | | | | | |
| <400> 1672 | ttcatctqqa | ggctctactg | gggaaaactc | cccttgcaaa | ctcactcagg | 60 |
| | | tttgtggctg | | | | 120 |
| | | tgaatttcct | | | | 180 |
| | | tttctctagt | | | | 240 |
| | | tgggtatgtg | | | | 300 |
| | | ttagaagtca gtgccaccgt | | | | 360 420 |
| | | cacgcttgaa | | | | 480 |
| | | catgcactcg | | | | 540 |
| cagagcctcc | acagacaggg | gagtccctga | | | | 600 |
| cccaaaacaa | agcaaagcca | ctgcctcgag | | | | 630 |
| <210> 1673 | | | | | | |
| <211> 2521 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1673 | | | | | | |
| cttgcccaag | gttatgtgtc | tattaaatgg | ctgcgtctgt | aaaattaaaa | tgctaactgt | 60 |
| | | tccccctagg | | | | 120 |
| | | tgtaataaat | | | | 180 |
| | | ggaaggctgt ctctcacttc | | | | 240 300 |
| | | aacatcctgg | • | | | 360 |
| | | actactttgc | | | | 420 |
| | | gccattggag | | | | 480 |
| atgggatgtt | gattctggac | cagaatcagg | ccttgtttct | gtgctcccat | tgggccccag | 540 |
| | | atgctctcca | | | | 600 |
| | | cttgccggtt | | | | 660 |
| | | aggaaaaaac | | | | 720 780 |
| | | tgccccgagc atgctgccct | | | | 840 |
| | | cctgaagctc | | | | 900 |
| | | ccccaaagg | | | | 960 |
| aagaaaaact | caaactgggg | gtggggacag | gaagcgcgga | tgagaagaaa | gccagaccgt | 1020 |
| | | catcttaacc | | | | 1080 |
| | | cgcagagagg | | | | 1140 |
| | | acacagtett | | | | 1200 1260 |
| | | tcccaggtgg .ccaggggggt | | | | 1320 |
| | | ttattattaa | | | | 1380 |
| | | atgcggtgag | | | | 1440 |
| | | agtacagagc | | | | 1500 |
| cagagataag | aatttacaat | atagtgtgtg | cgtcagtaat | ttctaacaga | gccttaaaac | 1560 |
| | | acctatgatt | | | | 1620 |
| | | aatccatgga | | | | 1680 |
| | | agtatgccct cctatcttat | | | | 1740 1800 |
| | | ggtcgtattc | | | | 1860 |
| | | cgtccattca | | | | 1920 |
| | | agtccaacct | | | | 1980 |

```
2040
ttttgtattt acaataatca ggagcatttc atcttttatt ctgtagcaat agtttcaggg
                                                                   2100
ggtctcccta aacagtctga ccccaaagct gactttcttc tgaagatacc cctaatccga
tcgctcagac atcagaatga gtacctaact gttcaggaca cacagttata tcaacatgct
                                                                   2160
cagagactgc tttctcttac ataaaatact actttccttt ttatcataaa aaataggatg
                                                                   2220
ggcatggtgg ctcacacctg taatcccagc actttgggag gccgaagtga gcagatcacc
                                                                   2280
agaggtcagg agttcgagac cagcctgacc aatggagaaa ccccatctct actaaaaata
                                                                   2340
caaaattagc caggcatggt ggtacatgcc tgtaatccca gctactcggg aggctgaggt
                                                                   2400
aggagaatta cttgaacctg ggaggtggag gttgcagtga gccgagattc agccattgca
                                                                   2460
2520
                                                                   2521
<210> 1674
<211> 1475
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (40)
<223> n equals a,t,g, or c
<400> 1674
gaattcggca cgagattgac ttcaactctg ctttgcaggn aatgccttga gaaataagag
                                                                     60
ggtaaatcca tttgctgaag gatatcacca tacgtgaaat ttctatctct ccaacacact
                                                                    120
cctagttaat ccactggatt cttaattgag aaaaatgacc attcccaaag atagcttgat
                                                                    180
tttatttaga ctattggctt tcatagtata tgttttatgg ttttctacga atattcacta
                                                                    240
ccctcaataa tctccaccta caataagctg cattgccaaa gggtcctgcc actgccaagt
                                                                    300
catttgtttg tcctaaactt ctttgttata ttatttktac aaattcttaa aagaaataat
                                                                    360
tgtcaataat cagttcttga gcatttacta tgtgktttac ataatagaga tgatattaaa
                                                                    420
tragcatatt ttccattccc ctgcaaatct ctttgccttg aaaatcacat actctaacag
                                                                    480
tctcctacca ttcatgctaa gtaagaaaaa tcaacccagg aaagaaagca caaactacaa
                                                                    540
                                                                    600
caaatcaatc ttttgtcaac tcaaagctga ctctcttgag tccttagcaa atctaagtaa
                                                                    660
atagttttaa aagccaggat ttgtgaaaac aaaatagttt ttctgaattg taatagctcc
ctttacacat gttaaaatac aggcttatct agatcatgga aaatattatt tgttcttttt
                                                                    720
                                                                    780
ttttttttt ttgagacaga gtctcactct gtcgcccagc ctggagtgca gtggcacgat
                                                                    840
cttggctcac tgcaagctct gcctcccagg ttcacaccat tctcctgcct cagcctcccg
agtagctggg actacaggca cctgccacca ggcccggcta atttttgta tttttagttg
                                                                    900
agacgatgtt tcaccgtgtt agccaggatg gtctcgatct cctgacctcg tgattccccc
                                                                    960
accteggeet cecaaggtge tggaattaca ggegtgagee accaegeeeg gseaatttgt
                                                                   1020
tcattttcaa gataatacct ccattgattg ctctattatg acaagcmctg awtgatataa
                                                                   1080
gtgttttgca tgtwttcact cctttctacc ttacaacaat ctccatctca tttgttcact
                                                                   1140
cgtgtgtccc aagctcctat aacatggact gatagacagt ggacaaaata aatatgtgct
                                                                   1200
atgtgaataa gcaactttat gaaatatata ctggacagta tatatttcta tgtacatttt
                                                                   1260
gcagataaat aaacagaggc acagagcagt tatgcttcat ttccaagatt ttatactcag
                                                                   1320
tagtaataac taagattcag gatagggaaa gtgattctcc taaacttcaa gtgaggtggt
                                                                   1380
caacgtcatt agagccaaaa caactctaga ttctctaact tcaaacctat acataattta
                                                                   1440
taggattttc tgccaaaaaa aaaaaaaaa ctcga
                                                                   1475
<210> 1675
<211> 1784
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (555)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (559)
```

```
<223> n equals a,t,g, or c
<400> 1675
ggcacgagct ggtgttga taatgctctg tttcttgatc tggagactag ttatgtgggt
                                                                    60
gtgttccact tgcaaaaaaa tgcatcgagc tcaagataag tgtgcttttc cgtaaggata
                                                                   120
tttcatctca atagaaaatt tggcttttgt gtcaactctg cctaaagtaa gtgggaaact
                                                                   180
acaaaaactg gggacttgga catcttttaa tcaaactatg tatcaatgtc atgtcaaagg
                                                                   240
ttttgttatg tgtcatcttc cttgaatgag aatggcaaca agttttttt ttatcacaca
                                                                   300
gatttcctat gtgccttttt tccccagtcc tgatagtcta tgaaccaacc aaacttaggg
                                                                   360
aaaagtaaaa cagttaagtc ctgtatttcc accttattta caatataatg ccctctacag
                                                                   420
aaaataatca cagaaacaca gaaaatgact tctccagaga tgagaaatgt gcatgtgacg
                                                                   480
ccactctgag ttatctcctt caagaagtat gtattcyata atctgggaga agagtaaatt
                                                                   540
                                                                   600
aacactccaa ctccnaagnt caataattat aatatgagag agacaacagt ggaaagaatg
aatgtcctca ggcttaattt actagcmggr aagamcagtc agaggaaaaa aaaaaaaaaa
                                                                   660
aaagmccgag amcaytgagc tctcttctgg aatgscagaa ggmccacttt ctcctgcata
                                                                   720
aatgaagsca gggctaatmc aaaacgtttt ctgggtatta tttaacctct cctacccagg
                                                                   780
                                                                   840
ctattttagc tcagtaggaa attcacccac taggtggacc ttggagttca tccaccaccc
                                                                   900
caataaagat tgcctttctt atttgaagtg atgatcactt cttccaagca aaccaacaaa
                                                                   960
ccctaggtat tcaacctctg ataacctgcc tactaaggaa cttcagtgga atcaggggat
caacgatgct gtccccaaac tggcctaagg tgaaccaagg ggagaagtta acagcagcac
                                                                  1020
                                                                  1080
ttaaattgat ctactcatac tcaaggatta ctgagtcttc tgggcaagaa aagaaagcaa
                                                                  1140
ttacaaacta ccaataagga aaggtgtttt gaaaatagcg aaaaaaaaat gtcccctaca
                                                                  1200
cttcctttca aaggtagcct cagagctagt ctggctgcgc agatgaccag tgaaaataaa
tgaaaactgc agtacggtta tagatgatcc ttacacctca gcttgttctc aattgcaaaa
                                                                  1260
aaaaaaaaa aaaaatgcat ataatctaac actctcctgt ctaaattgct tcaaactttc
                                                                  1320
tcagaacgac cttcatcgtg gcggattctt tttctgcaaa cctttacagg ttgcacctgc
                                                                  1380
ttcacacaga accagcggaa acaaactagg aggagataaa agagaagaag taggaaggtt
                                                                  1440
                                                                  1500
1560
ggtccagtga ggaacaagac agagggtgaa acagaagtct ggcttactcc caaggcagaa
                                                                  1620
atcatgactc atcaaagctt tcagagggga cagaaccaga ctttgcattt gtcttgaggt
catcttcgag ccaagaaatg ctctcttaac cgggacctga gaactttaag ggtctgcgac
                                                                  1680
aactggctgt gaggccttgg gcaaaacctc taacgtctct ggggctcggt ttcctcatca
                                                                  1740
ggtgaagcca gggtccactc tagctttact agtctctcct cgag
                                                                  1784
<210> 1676
<211> 1743
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1561)
<223> n equals a,t,g, or c
<400> 1676
ggcacgagtg cattggttgc catgtaaaca gccagcttct ggcaggaaag cagctggacc
                                                                    60
aggtgacctg gctgtgacag agaacacaga tattgaatcc atgaaaccaa gagtaatcag
                                                                   120
tacaacgatt ttttttcttt tactttttaa aagtgtttgt caatccttta agttcttttt
                                                                   180
                                                                   240
gtctgactgc tgtcattaag taagaaaaat atgaaataaa taagtctttg ggtatgcaaa
attgggaaga tggacaggaa ttagtccctc tatgcaattt cctctgaatc tttcataatt
                                                                   300
totgtatcot catocottca cootcaacco tocaacacco totgttacco tgcaggcaac
                                                                   360
taggacagca tagagagcgt ctcttgaact tgactttctc ttccagtgct tgcctgccaa
                                                                   420
480
ttaataagat aagacagtga ctgtatagtg ctccccaaag tgccatcacc taaaatagcc
                                                                   540
ctttgraaag tgcycatata gaactgagaa ttttagtgta gtgscaggct ggatttgggt
                                                                   600
agggtgccyt tcggtggscc tccaaatcct atgggragct taattacttc atctttctgt
                                                                   660
aaggccaaca gttctcaaaa tttgtggtct caggmcaatt ttacactctt aaaaactgag
                                                                   720
gragatttct ggtctggaca tgtagtacag acctgttttt cattgttcct ccctgctaag
                                                                   780
cacaagtata aaccctggaa ataatgcaag agacaaccag ggtagaactc tggaaggttg
                                                                   840
taaggagaag gcaaactggt ttgagaccca gggaaaaaca aagagcaagg gtatcctatg
                                                                   900
tttcccaccc agcagaagaa agaaacctag tcctggccat tcctgatacc caactgaaca
                                                                   960
```

```
acagagggca gcccaggtaa gcttactcct ccctcagagt ccctctgaca acatcaggta
                                                                  1020
ggcccaacac cacaggtaag gggggatctt cagaaacccc accaacaaca gtggacaaaa
                                                                  1080
gaagcatttg ccttctcccc aggcctgaga tgtcccactt tcacctagag atatcgaggt
                                                                  1140
gggagggtag aacagacacg aggcataaag tgatggcaag cggcccagtc tgggaaggct
                                                                  1200
ctgtctcagt gggtgtatga ctgtcctctc ctacccatag agacaccaac agtgcagggc
                                                                  1260
gccagtagaa gtgtcccacc atacctaccc caactgagag gcacctggaa gcctgaccta
                                                                  1320
gggaaacctt tctgctcctt caggcgatat gatctgggac aaatgtcagc ctcagtgata
                                                                  1380
tccgataaac caaacagagc aaaacaatac tgaaaattaa actgctgtta gaacaacaga
                                                                  1440
ccacaaaagt aagccaacac ctgcttgcat gtgaagcata aataatgtga ctgactgcaa
                                                                  1500
aaataaaaaa tgtaaatatg agtttcctaa catagtagac aaaatgttca atcaaaaatc
                                                                  1560
ntctgtcata ccaagaatca agtaaatcac aacttgactg agaaaaggca actactgcca
                                                                  1620
acattaagat gagttcgatg ttggaattat ctgacaagga tttcaaagta gccatcataa
                                                                  1680
1740
gag
                                                                  1743
<210> 1677
<211> 1201
<212> DNA
<213> Homo sapiens
<400> 1677
gatatggaga gtcaattgca tttcattatg cccaaaggta aatgcataac tttttccgca
                                                                    60
cagctaatct tctagcaacc ccgttgctgt ccatggcaag caggttagtt actctcgccc
                                                                   120
tttcccgttt caggttcatt aaaaaactct tgtcaaaatc tctttcatcc catcttattc
                                                                   180
ttcattctca cttccatcag catatcagtc caggccctag taacattaat gttactaatg
                                                                   240
gcactgttag taacattact taccagcatt caagtgggtc ttcctgatgc cattctctcc
                                                                   300
catcctgaaa tcactgctgt ttatatagat cttgtatgat gtcattcatt ggctcaaaaa
                                                                   360
cttttaaagc cttccttttt ctaccacccc aatctaaatt tcaatgcctg gcttttatta
                                                                   420
aaacccataa tttggcccca ccctagctat ttaactttat tttccactat tcgccagtct
                                                                   480
cctccctcat caacgagaag acataccata atcaacctca cctctaaccc ttggaatatc
                                                                   540
                                                                   600
taaacttaaa aatggtcctt ccttycccct ttactkgtat ttaaagamcc tgatgaatta
ttcctcctct gctaaacttt tcacaattct tcaacctcat ttatgtttca cattttcaga
                                                                   660
acatatcttg ccgtttatta ggaatctcac aattaggcac tctcatgtag atagatttac
                                                                   720
gatcatgtat gttgtcatct tctattaaat tccatactcc ttgaaggcag gagccatgcc
                                                                   780
ttattctgtc ccccagagta ctcagaatga tgcagagcac acagaaagta ctcaaatctt
                                                                   840
gttgactgat ccagtgagaa atgaccaact tcagttccag cctctcttta acatgtacat
                                                                   900
agcaatttgg gcaagtcaag ctccatcctg aaggacataa taggggactc tttaagcaca
                                                                   960
ttattatgaa ggcccttcag ggataacacc agagtgatga ggtgccctat accagggata
                                                                  1020
atggagacag agtacttggg attcatcact ggggtcctca aagcatcttc caagggcata
                                                                  1080
ataaggaagg actcaaacac ctttgaatct ctgtgagacc agtcatgagg tcttttgaaa
                                                                  1140
1200
                                                                  1201
<210> 1678
<211> 1815
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1360)
<223> n equals a,t,g, or c
<400> 1678
ggcacgagcg acaagccatc ccctgccct tcctgcaggc tgccttaccc attcagaggg
                                                                    60
aggeegagge tgtgeeggag eggeeeacag etgegggaee gegtteeagg gtgtgetetg
                                                                   120
ctgcaagcat gagggaagga cagttaaaag caaaacggaa gccttgcatg ggccgcttat
                                                                   180
gcttctggag ctactttttt ttttttttt tttttactat acatggtatt tagataaagg
                                                                   240
tctagagtaa aaggctctac aaccatctta tgttcagagg tcagtgtgtg acttaattta
                                                                   300
acatttcctt tacttttgtt tttctccatc ttgtatttta tagccagagc ctgaacctcc
                                                                   360
```

420

tegtegattt tttgtegace agtgggaget ttetettagt etcegeteet etgeeegeee

| cgcctctccc | tccyccgact | ccytccgaca | ggtagcatgg | cctaggactc | actaaaactc | 480 |
|---|---|---|--|--|---|--|
| | agcctccact | | | | | 540 |
| | acttgggccc | | | | | 600 |
| tgtgtcggtc | tcgtgtgtra | ggtctgtggc | acactcctca | gctaaagtgg | ctactaactt | 660 |
| tcatccaamt | gawctgacac | atccaggtct | gttgatgtga | acccgctttg | atcctatttc | 720 |
| aactatatca | aataatgata | aatgttttgc | agccattggc | ttttttaact | tcacatgtct | 780 |
| | tatgtgttaa | | | | | 840 |
| gggtgatgat | gcggtattct | ggctgcctgt | tgtcatcatt | tgaggaatgt | acgcgrctgt | 900 |
| cacctgaagt | agcgctggtc | cagttgtagg | gagtttctag | agagattaga | aggtctcttt | 960 |
| gccactccta | ctggtatttc | ccatgcctga | gttgacgcca | gacctcacgt | cctatgtgca | 1020 |
| tggtagcata | tgcacgcgta | tggtgtgcgg | caggatetga | agtagcactg | gttcagttgt | 1080 |
| agggagtttc | tagagagatt | ggaaggtete | tttaccactt | ctactootat | ttcccatgcc | 1140 |
| tgggttgagg | cctatgtgca | tggtagcata | tacacacata | taatatacaa | tgggatcgat | 1200 |
| cccgcaattg | ccacatttct | gctatttttt | atgagtgatg | agaaggaaac | catcoctttt | 1260 |
| catgccagaa | acaaatagaa | cttgagtctt | cacctctctk | gcagggatgc | ttatcagtat | 1320 |
| tgccaacttg | ctgagaactg | aatgtggcag | atqcctttqn | acgggcagcc | ccaggtttag | 1380 |
| ttcaactaaa | cccagatggt | ttagttcagg | agaaaagggt | cctggctgag | cagtgagggc | 1440 |
| ccagggctgg | cttggtgtcc | tggcctcata | cttggcatct | ggcccacact | accccatate | 1500 |
| tgctgcagaa | tgagagaaat | gccattttct | gctccctcag | tatcaactat | taagttacct | 1560 |
| gctcagctct | gcctggtgtc | tatctatccc | aagcctcagt | ttctttagtg | tccctaaaga | 1620 |
| aggtttagat | ctgagagcca | catatttatc | ttgaccacta | ataggtataa | tctgtgaagt | 1680 |
| taatgggcaa | atggcaccaa | tccttgggaa | tcttattttt | gaattaaaag | ctataattgc | 1740 |
| ttcttcagtt | cagctgagcc | ttgagctgag | ccacaagaac | gacttcatca | tatatacata | 1800 |
| tgtgagcccc | | | J | 555 | -9-9-9-00 | 1815 |
| | | | | | | |
| <210> 1679 | | | | | | |
| <211> 925 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| | | | | | | |
| <400> 1679 | | | | | | |
| | gaaatgtagt | tgtaaggaaa | aatgaaatga | aaaagtttga | aatctaaagg | 60 |
| ggcacgagca | gaaatgtagt atctaagtag | tgtaaggaaa caggccaaat | aatgaaatga ttatctgcaa | aaaagtttga tgtaaagcct | aatctaaagg ccttgatgtt | 60 120 |
| ggcacgagca aaaaaaggaa | atctaagtag | caggccaaat | ttatctgcaa | tgtaaagcct | ccttgatgtt | 120 |
| ggcacgagca aaaaaaggaa atttccttta | atctaagtag tttttcatac | caggccaaat taagtatttt | ttatctgcaa tagtgtacat | tgtaaagcct attgtaaatt | ccttgatgtt caactttaga | 120 180 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa | atctaagtag tttttcatac cagtcccaaa | caggccaaat taagtatttt gggtgtaagt | ttatctgcaa tagtgtacat atcttgacca | tgtaaagcct attgtaaatt ccatatcaag | ccttgatgtt caactttaga agcactgtgt | 120 180 240 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag | atctaagtag tttttcatac cagtcccaaa atggaaaccc | caggccaaat taagtatttt gggtgtaagt atggctactt | ttatctgcaa tagtgtacat atcttgacca catgacatag | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga | ccttgatgtt caactttaga agcactgtgt gacggtgtag | 120 180 240 300 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag gtaggacccg | atctaagtag tttttcatac cagtcccaaa atggaaaccc tcatcttgct | caggccaaat taagtatttt gggtgtaagt atggctactt tcagcaagtt | ttatctgcaa tagtgtacat atcttgacca catgacatag gccctggttc | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct | 120 180 240 300 360 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag gtaggacccg aggccctaat | atctaagtag tttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc | caggccaaat taagtatttt gggtgtaagt atggctactt tcagcaagtt agctctatag | ttatctgcaa tagtgtacat atcttgacca catgacatag gccctggttc cctagggact | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa | 120 180 240 300 360 420 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag gtaggacccg aggccctaat atgggatacc | atctaagtag tttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg | caggccaaat taagtatttt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga | ttatctgcaa tagtgtacat atcttgacca catgacatag gccctggttc cctagggact ggagagacat | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag | 120 180 240 300 360 420 480 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag gtaggacccg aggccctaat atgggatacc gggtagggag | atctaagtag tttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg cttctgtgcc | caggccaaat taagtatttt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga cactaggggc | ttatctgcaa tagtgtacat atcttgacca catgacatag gccctggttc cctagggact ggagagacat atgctgcct | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt ccatatgttc | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag agctagccag | 120 180 240 300 360 420 480 540 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag gtaggacccg aggccctaat atgggatacc gggtagggag aagccgtctg | atctaagtag tttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg cttctgtgcc aatcctgtcc | caggccaaat taagtatttt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga cactaggggc ttttggtttt | ttatctgcaa tagtgtacat atcttgacca catgacatag gccctggttc cctagggact ggagagacat atgctgccct gatggaggtt | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt ccatatgttc ttcatctgta | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag agctagccag ggcgtgactg | 120 180 240 300 360 420 480 540 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag gtaggacccg aggccctaat atgggatacc gggtagggag aagccgtctg attaaactgt | atctaagtag tttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg cttctgtgcc aatcctgtcc tgtcctgcca | caggccaaat taagtatttt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga cactaggggc ttttggtttt ctggggatca | ttatctgcaa tagtgtacat atcttgacca catgacatag gccctggttc cctagggact ggagagacat atgctgccct gatggaggtt aattaacctt | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt ccatatgttc ttcatctgta ctgcctcttc | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag agctagccag ggcgtgactg ccgaatgctg | 120 180 240 300 360 420 480 540 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag gtaggacccg aggccctaat atgggatacc gggtagggag aagccgtctg attaaactgt ggrggggggg tgctgcagc | atctaagtag tttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg cttctgtgcc aatcctgtcc tgtcctgcca ggcagctgaa catgagtcaa | caggccaaat taagtattt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga cactaggggc ttttggtttt ctggggatca agccccaacc ctcactagca | ttatctgcaa tagtgtacat atcttgacca catgacatag gccctggttc cctagggact ggagagacat atgctgccct gatggaggtt aattaacctt ctcctattcc tataaaaaga | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt ccatatgttc ttcatctgta ctgcctcttc ccaaactaga caccactttg | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag agctagccag ggcgtgactg ccgaatgctg gctacctagg tggagattt | 120 180 240 300 360 420 480 540 600 660 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag gtaggacccg aggccctaat atgggatacc gggtagggag aagccgtctg attaaactgt ggrggggggg tgctgcagc | atctaagtag tttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg cttctgtgcc aatcctgtcc tgtcctgcca ggcagctgaa catgagtcaa | caggccaaat taagtattt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga cactaggggc ttttggtttt ctggggatca agccccaacc ctcactagca | ttatctgcaa tagtgtacat atcttgacca catgacatag gccctggttc cctagggact ggagagacat atgctgccct gatggaggtt aattaacctt ctcctattcc tataaaaaga | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt ccatatgttc ttcatctgta ctgcctcttc ccaaactaga caccactttg | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag agctagccag ggcgtgactg ccgaatgctg gctacctagg tggagattt | 120 180 240 300 360 420 480 540 600 660 720 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag gtaggacccg aggccctaat atgggatacc gggtagggag aagccgtctg attaaactgt ggrgggggg tgctgcagc aaaaattgta | atctaagtag tttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg cttctgtgcc aatcctgtcc tgtcctgcca ggcagctgaa | caggccaaat taagtattt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga cactaggggc ttttggtttt ctggggatca agccccaacc ctcactagca gccaggaagc | ttatctgcaa tagtgtacat atcttgacca catgacatag gccctggttc cctagggact ggagagacat atgctgcct gatggaggtt aattaacctt ctcctattcc tataaaaaga agggtctagg | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt ccatatgttc ttcatctgta ctgcctcttc ccaaactaga caccactttg accacattg | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag agctagccag ggcgtgactg ccgaatgctg gctacctagg tggagattt tattacacaa | 120 180 240 300 360 420 480 540 600 660 720 780 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag gtaggacccg aggccctaat atgggatacc gggtagggag aagccgtctg attaaactgt ggrgggggg tgctgccagc aaaaattgta tatcacacct | atctaagtag tttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg cttctgtgcc aatcctgtcc tgtcctgcca ggcagctgaa catgagtcaa gtagttgtat | caggccaaat taagtattt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga cactagggc ttttggtttt ctggggatca agccccaacc ctcactagca gccaggaagc gctcaatcag | ttatctgcaa tagtgtacat atcttgacca catgacatag gccctggttc cctagggact ggagagacat atgctgcct gatggaggtt aattaacctt ctcctattcc tataaaaaga agggtctagg | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt ccatatgttc ttcatctgta ctgcctcttc ccaaactaga caccactttg accacattg | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag agctagccag ggcgtgactg ccgaatgctg gctacctagg tggagattt tattacacaa | 120 180 240 300 360 420 480 540 600 660 720 780 840 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag gtaggacccg aggccctaat atgggatacc gggtagggag aagccgtctg attaaactgt ggrgggggg tgctgccagc aaaaattgta tatcacacct | atctaagtag tttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg cttctgtgcc aatcctgtcc tgtcctgcca ggcagctgaa catgagtcaa gtagttgtat gtgcatacca | caggccaaat taagtattt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga cactagggc ttttggtttt ctggggatca agccccaacc ctcactagca gccaggaagc gctcaatcag | ttatctgcaa tagtgtacat atcttgacca catgacatag gccctggttc cctagggact ggagagacat atgctgcct gatggaggtt aattaacctt ctcctattcc tataaaaaga agggtctagg | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt ccatatgttc ttcatctgta ctgcctcttc ccaaactaga caccactttg accacattg | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag agctagccag ggcgtgactg ccgaatgctg gctacctagg tggagattt tattacacaa | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag gtaggacccg aggccctaat atgggatacc gggtagggag aagccgtctg attaaactgt ggrgggggg tgctgccagc aaaaattgta tatcacacct | atctaagtag tttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg cttctgtgcc aatcctgtcc tgtcctgcca ggcagctgaa catgagtcaa gtagttgtat gtgcatacca | caggccaaat taagtattt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga cactagggc ttttggtttt ctggggatca agccccaacc ctcactagca gccaggaagc gctcaatcag | ttatctgcaa tagtgtacat atcttgacca catgacatag gccctggttc cctagggact ggagagacat atgctgcct gatggaggtt aattaacctt ctcctattcc tataaaaaga agggtctagg | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt ccatatgttc ttcatctgta ctgcctcttc ccaaactaga caccactttg accacattg | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag agctagccag ggcgtgactg ccgaatgctg gctacctagg tggagattt tattacacaa | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag gtaggacccg aggccctaat atgggatacc gggtagggag aagccgtctg attaaactgt ggrgggggg tgctgccagc aaaaattgta tatcacacct taaaaaaaaa <210> 1680 <211> 921 | atctaagtag tttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg cttctgtgcc aatcctgtcc tgtcctgcca ggcagctgaa catgagtcaa gtagttgtat gtgcatacca | caggccaaat taagtattt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga cactagggc ttttggtttt ctggggatca agccccaacc ctcactagca gccaggaagc gctcaatcag | ttatctgcaa tagtgtacat atcttgacca catgacatag gccctggttc cctagggact ggagagacat atgctgcct gatggaggtt aattaacctt ctcctattcc tataaaaaga agggtctagg | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt ccatatgttc ttcatctgta ctgcctcttc ccaaactaga caccactttg accacattg | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag agctagccag ggcgtgactg ccgaatgctg gctacctagg tggagattt tattacacaa | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag gtaggacccg aggccctaat atgggatacc gggtagggag aagccgtctg attaaactgt ggrgggggg tgctgccagc aaaaattgta tatcacacct taaaaaaaaa <210> 1680 <211> 921 <212> DNA | atctaagtag tttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg cttctgtgcc aatcctgtcc tgtcctgcca ggcagctgaa catgagtcaa gtagttgtat gtgcatacca aaaaaaaaac | caggccaaat taagtattt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga cactagggc ttttggtttt ctggggatca agccccaacc ctcactagca gccaggaagc gctcaatcag | ttatctgcaa tagtgtacat atcttgacca catgacatag gccctggttc cctagggact ggagagacat atgctgcct gatggaggtt aattaacctt ctcctattcc tataaaaaga agggtctagg | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt ccatatgttc ttcatctgta ctgcctcttc ccaaactaga caccactttg accacattg | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag agctagccag ggcgtgactg ccgaatgctg gctacctagg tggagattt tattacacaa | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag gtaggacccg aggccctaat atgggatacc gggtagggag aagccgtctg attaaactgt ggrgggggg tgctgccagc aaaaattgta tatcacacct taaaaaaaaa <210> 1680 <211> 921 | atctaagtag tttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg cttctgtgcc aatcctgtcc tgtcctgcca ggcagctgaa catgagtcaa gtagttgtat gtgcatacca aaaaaaaaac | caggccaaat taagtattt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga cactagggc ttttggtttt ctggggatca agccccaacc ctcactagca gccaggaagc gctcaatcag | ttatctgcaa tagtgtacat atcttgacca catgacatag gccctggttc cctagggact ggagagacat atgctgcct gatggaggtt aattaacctt ctcctattcc tataaaaaga agggtctagg | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt ccatatgttc ttcatctgta ctgcctcttc ccaaactaga caccactttg accacattg | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag agctagccag ggcgtgactg ccgaatgctg gctacctagg tggagattt tattacacaa | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag gtaggacccg aggccctaat atgggatacc gggtagggag aagccgtctg attaaactgt ggrgggggg tgctgccagc aaaaattgta tatcacacct taaaaaaaaa <210> 1680 <211> 921 <212> DNA | atctaagtag tttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg cttctgtgcc aatcctgtcc tgtcctgcca ggcagctgaa catgagtcaa gtagttgtat gtgcatacca aaaaaaaaac | caggccaaat taagtattt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga cactagggc ttttggtttt ctggggatca agccccaacc ctcactagca gccaggaagc gctcaatcag | ttatctgcaa tagtgtacat atcttgacca catgacatag gccctggttc cctagggact ggagagacat atgctgcct gatggaggtt aattaacctt ctcctattcc tataaaaaga agggtctagg | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt ccatatgttc ttcatctgta ctgcctcttc ccaaactaga caccactttg accacattg | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag agctagccag ggcgtgactg ccgaatgctg gctacctagg tggagattt tattacacaa | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa ggaggcaag gtaggacccg aggccctaat atgggatacc gggtagggag aagccgtctg attaaactgt ggrgggggg tgctgccagc aaaaattgta tatcacacct taaaaaaaaa <210> 1680 <211> 921 <212> DNA <213> Homo <400> 1680 | atctaagtag tttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg cttctgtgcc aatcctgtcc tgtcctgcca ggcagctgaa catgagtcaa gtagttgtat gtgcatacca aaaaaaaaac | caggccaaat taagtattt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga cactaggggc ttttggtttt ctggggatca agcccaacc ctcactagca gccaggaagc gctcaatcag tcgag | ttatctgcaa tagtgtacat atcttgacca catgacatag gccttggttc cctagggact ggagagacat atgctgcct gatggaggtt aattaacctt ctctattcc tataaaaaga agggtctagg aacacaaaat | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt ccatatgttc ttcatctgta ctgcctcttc ccaaactaga caccactttg accaaatatg ttcataaaatg | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag agctagccag ggcgtgactg ccgaatgctg gctacctagg tggagattt tattacacaa atactgaatt | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag gtaggacccg aggccctaat atgggatacc gggtagggag aagccgtctg attaaactgt ggrgggggg tgctgccagc aaaaattgta tatcacacct taaaaaaaaa <210> 1680 <211> 921 <212> DNA <213> Homo <400> 1680 ggcacgaggg | atctaagtag tttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg cttctgtgcc aatcctgtcc tgtcctgcaa ggcagctgaa catgagtcaa gtagttgtat gtgcatacca aaaaaaaaac sapiens catgcctccc | caggccaaat taagtattt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga cactaggggc ttttggtttt ctggggatca agcccaacc ctcactagca gccaggaagc gctcaatcag tcgag | ttatctgcaa tagtgtacat atcttgacca catgacatag gccttggttc cctagggact ggagagacat atgctgcct gatggaggtt aattaacctt ctctattcc tataaaaaga agggtctagg aacacaaaat | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt ccatatgttc ttcatctgta ctgcctcttc ccaaactaga caccactttg accaaatatg ttcaaaaatg ttcaaaaatg | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag agctagccag ggcgtgactg ccgaatgctg gctacctagg ttgagattt tattacacaa atactgaatt | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag gtaggacccg aggccctaat atgggatacc gggtagggag aagccgtctg attaaactgt ggrgggggg tgctgccagc aaaaattgta tatcacacct taaaaaaaaa <210> 1680 <211> 921 <212> DNA <213> Homo <400> 1680 ggcacgaggg tctgtaagct | atctaagtag ttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg cttctgtgcc aatcctgtcc tgtcctgcaa ggagctgaa catgagtcaa gtagttgtat gtgcatacca aaaaaaaaac sapiens catgcctcc gctggcctc | caggccaaat taagtatttt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga cactaggggc ttttggtttt ctggggatca agcccaacc ctcactagca gccaggaagc gctcaatcag tcgag | ttatctgcaa tagtgtacat atcttgacca catgacatag gccttggttc cctagggact ggagagacat atgctgcct gatggaggtt aattaacctt ctctattcc tataaaaaga agggtctagg aacacaaaat acattccctg ccaactcatt | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt ccatatgttc ttcatctgta ctgcctcttc ccaaactaga caccactttg accaaatatg ttcaaaaatg ttcaaaaatg cttcatcaaactaga cactctcaaactaga | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag agctagccag ggcgtgactg ccgaatgctg gctacctagg ttgagattt tattacacaa atactgaatt | 120 180 240 300 360 420 480 540 600 720 780 840 900 925 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa ggaggcaag gtaggacccg aggccctaat atgggatacc gggtagggag aagccgtctg attaaactgt ggrgggggg tgctgccagc aaaaattgta tatcacacct taaaaaaaaa <210> 1680 <211> 921 <212> DNA <213> Homo <400> 1680 ggcacgaggg tctgtaagct acctctcctc | atctaagtag ttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg cttctgtgcc aatcctgtcc tgtcctgcca ggcagctgaa catgagtcaa gtagttgtat gtgcatacca aaaaaaaaac sapiens catgcctcc gctggcctc tgtcctgctc | caggccaaat taagtattt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga cactaggggc ttttggttt ctggggatca agcccaacc ctcactagca gccaggaagc gctcaatcag tcgag tcgag tcgag tcgag tcgag tcgag tcgagt ataacctgct tcccatatgc | ttatctgcaa tagtgtacat atcttgacca catgacatag gccttggttc cctagggact ggagagacat atgctgcct gatggaggtt aattaacctt ctctattcc tataaaaaga agggtctagg aacacaaaat acattccctg ccaactcatt tgcaaactca | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt ccatatgttc ttcatctgta ctgcctcttc ccaaactaga caccactttg accaaatatg ttcaaaaatg ttcaaaaatg cccccccccc | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag agctagccag ggcgtgactg ccgaatgctg gctacctagg tggagattt tattacacaa atactgaatt caagctcacc attggggaac tcccagctcc | 120 180 240 300 360 420 480 540 600 720 780 840 900 925 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa ggaggcaag gtaggacccg aggccctaat atgggatacc gggtagggag aagccgtctg attaaactgt ggrgggggg tgctgccagc aaaaattgta tatcacacct taaaaaaaaa <210> 1680 <211> 921 <212> DNA <213> Homo <400> 1680 ggcacgaggg tctgtaagct acctctcctc | atctaagtag ttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg cttctgtgcc aatcctgtcc tgtcctgcca ggcagctgaa catgagtcaa gtagttgtat gtgcatacca aaaaaaaaac sapiens catgcctcc gctggcctc tgtcctgctc | caggccaaat taagtattt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga cactaggggc ttttggttt ctggggatca agcccaacc ctcactagca gccaggaagc gctcaatcag tcgag tcgag tcgag tcgag tcgag tcgag tcgagt ataacctgct tcccatatgc | ttatctgcaa tagtgtacat atcttgacca catgacatag gccttggttc cctagggact ggagagacat atgctgcct gatggaggtt aattaacctt ctctattcc tataaaaaga agggtctagg aacacaaaat acattccctg ccaactcatt tgcaaactca | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt ccatatgttc ttcatctgta ctgcctcttc ccaaactaga caccactttg accaaatatg ttcaaaaatg ttcaaaaatg cccccccccc | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag agctagccag ggcgtgactg ccgaatgctg gctacctagg tggagattt tattacacaa atactgaatt caagctcacc attggggaac tcccagctcc | 120 180 240 300 360 420 480 540 600 720 780 840 900 925 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag gtaggacccg aggccctaat atgggatacc gggtagggag aagccgtctg attaaactgt ggrgggggg tgctgccagc aaaaattgta tatcacacct taaaaaaaaa <210> 1680 <211> 921 <212> DNA <213> Homo <400> 1680 ggcacgaggg tctgtaagct acctctcctc cagctcctg actgtcccac | atctaagtag ttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg cttctgtgcc aatcctgtcc tgtcctgcca ggcagctgaa catgagtcaa gtagttgtat gtgcatacca aaaaaaaaac sapiens catgcctcc gctggcctcc tgtcctgctc gccaggttg ctgcaccatg | caggccaaat taagtattt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga cactaggggc ttttggttt ctggggatca agcccaacc ctcactagca gccaggaagc gctcaatcag tcgag ttgctgcagt ataacctgct tcccatatgc gtcgttctc ctgcgttctc | ttatctgcaa tagtgtacat atcttgacca catgacatag gccttggttc cctagggact ggagagacat atgctgcct gatggaggtt aattaacctt ctctattcc tataaaaaga agggtctagg aacacaaaat acattccctg ccaactcatt tgcaaactca ttgcttcct tcagcaccac | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt ccatatgttc ttcatctgta ctgcctcttc ccaaactaga caccactttg accaaatatg ttcaaaaatg ttcataaactgcccccccccc | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag agctagccag ggcgtgactg ccgaatgctg gctacctagg tggagattt tattacacaa atactgaatt caagctcacc attggggaac tcccagctcc atagcacggt gccactggcc | 120 180 240 300 360 420 480 540 600 720 780 840 900 925 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag gtaggacccg aggccctaat atgggatacc gggtagggag aagccgtctg attaaactgt ggrgggggg tgctgccagc aaaaattgta tatcacacct taaaaaaaaa <210> 1680 <211> 921 <212> DNA <213> Homo <400> 1680 ggcacgaggg tctgtaagct acctctcctc cagctcctgg actgtcccac taattcgtgt | atctaagtag ttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg cttctgtgcc aatcctgtcc tgtcctgcca ggcagctgaa catgagtcaa gtagttgtat gtgcatacca aaaaaaaaac sapiens catgcctccc gctggcctcc tgtcctgctc tgtcctgctc tgtcctgctc tgtcctgctc | caggccaaat taagtattt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga cactaggggc ttttggttt ctggggatca agcccaacc ctcactagca gccaggaagc gctcaatcag tcgag ttgctgcagt ataacctgct tcccatatgc gtcgttctc gtcctcctt | ttatctgcaa tagtgtacat atcttgacca catgacatag gccttggttc cctagggact ggagagacat atgctgcct gatggaggtt aattaacctt ctctattcc tataaaaaga agggtctagg aacacaaaat acattccctg ccaactcatt tgcaaactca ttgctgaccac cttgacctgg | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt ccatatgttc ttcatctgta ctgcctcttc ccaaactaga caccactttg accaaatatg ttcaaaaatg ttcatactgcc cctctccc cctctgctc | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag agctagccag ggcgtgactg ccgaatgctg gctacctagg tggagattt tattacacaa atactgaatt caagctcacc attggggaac tcccagctcc atagcacggt gccactggcc actgctcacc | 120 180 240 300 360 420 480 540 600 720 780 840 900 925 |
| ggcacgagca aaaaaaggaa atttccttta aatggaaaaa gagaggcaag gtaggacccg aggccctaat atgggatacc gggtagggag aagccgtctg attaaactgt ggrgggggg tgctgccagc aaaaattgta tatcacacct taaaaaaaaa <210> 1680 <211> 921 <212> DNA <213> Homo <400> 1680 ggcacgaggg tctgtaagct acctctcctc cagctcctgg actgtcccac taattcgtgt | atctaagtag tttttcatac cagtcccaaa atggaaaccc tcatcttgct tctttcatcc cttagaaagg cttctgtgcc aatcctgtcc tgtcctgcca ggcagctgaa catgagtcaa gtagttgtat gtgcatacca aaaaaaaaac sapiens catgcctccc gctggcctcc tgtcctgctc gcccaggttg | caggccaaat taagtattt gggtgtaagt atggctactt tcagcaagtt agctctatag aagcagatga cactaggggc ttttggttt ctggggatca agcccaacc ctcactagca gccaggaagc gctcaatcag tcgag ttgctgcagt ataacctgct tcccatatgc gtcgttctc gtcctcctt | ttatctgcaa tagtgtacat atcttgacca catgacatag gccttggttc cctagggact ggagagacat atgctgcct gatggaggtt aattaacctt ctctattcc tataaaaaga agggtctagg aacacaaaat acattccctg ccaactcatt tgcaaactca ttgctgaccac cttgacctgg | tgtaaagcct attgtaaatt ccatatcaag cctctaaaga cttgccgctt tctcacatgt agcgcaaggt ccatatgttc ttcatctgta ctgcctcttc ccaaactaga caccactttg accaaatatg ttcaaaaatg ttcatactgcc cctctccc cctctgctc | ccttgatgtt caactttaga agcactgtgt gacggtgtag actcctacct tttgtggcaa atggggaaag agctagccag ggcgtgactg ccgaatgctg gctacctagg tggagattt tattacacaa atactgaatt caagctcacc attggggaac tcccagctcc atagcacggt gccactggcc actgctcacc | 120 180 240 300 360 420 480 540 600 720 780 840 900 925 |

```
gctcacgtcc cagtggccca ggctatgagt cctttccagg gccccacaac cctgactccc
                                                                       480
ctaaaccttc ctgattcttt tctcatcctt tctttcacac tgtgtaaaaa cactctgggg
                                                                       540
agcctctgcc tctgaatctc ctamcttctt cctgtcacca gagtagtttg tctttgtcac
                                                                       600
teattegtgt eccaetttet geceateete gteeceegg taegaatgea mecagtetea
                                                                       660
acctgamtct cctgccctgs ctgagamcca gctcctctgc tcctcctggg tgctcctgtc
                                                                       720
agtcccaccc tcctcccacc tcctccctcc ttaaggccca tgtcttcaag acgctctcct
                                                                       780
tccacactgt ctccatttcc ctttgcacct tccctcccg tgacaacaga tcccctgctc
                                                                       840
tetgetetea ecegeaeage ceaetteete tgtgteaetg ggeeectate ttggeeteae
                                                                       900
tcctccacct gagtcctcga g
                                                                       921
<210> 1681
<211> 979
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (48)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (773)
<223> n equals a,t,g, or c
<400> 1681
ggcacgagaa tagggctacc tggagcaaac cctggctccg taggatgnat cctggggttt
                                                                        60
cctggctgct ggggcggcag tctcgccctc ccagtcggcc tgcggttggt gggtgggga
                                                                       120
gggggcggtt ctcgctgcca cggatccaga aggccaaatt gaaccctcgt tctgggattt
                                                                       180
ctggctccta ctcccgcagg ccgcttgggt gactgtcctt ttttggagag gatatagaga
                                                                       240
cacagetgtg geetetgeac actgetette ttecaggete aggaaaggee etegeceagg
                                                                       300
atgtegeeae teagaaggee gagaeeeage ggtetteaat agaagteegg gaggeeggga
                                                                       360
cgcagcgttc ggtggargtc cgggargccg ggacccagcg ttcggtggaa gtccaggagg
                                                                       420
tegggacaca gggtteteeg gtggaggtge aggagseegg gacceageag teteteeagg
                                                                       480
ctgccaacaa gtcggggacc cagcgatccc ccgaagctgc cagcaaggsa tgacccagcg
                                                                       540
gtttcgcgag gatgcccggg acccagttac tagattatga aggcatctca gsccctggas
                                                                       600
ccagagccag tcagggktta aagtgaaagc ccgtatttcc gcccagaagc tggggttggg
                                                                       660
gagaggatgt ggattttttg ttttaccctt tctgttgcat ggttgcaaac acaaacttga
                                                                      720
gttctaataa agaattgcaa agtggaagcc cgcccccgc ctccccccyc mtnacttaag
                                                                      780
tccaggaagc tggggtggcg aggaaggatg atgtggattg tttttgtttt acaccttctq
                                                                      840
ttgaatggtt gccaacacaa acttgagttc taataaataa ttgcatttcc ctaacgtctg
                                                                      900
tattttggaa ggtagagggg agggaaaggc gcattcctcc aacagcccaq ttctqccctq
                                                                      960
cgcagccctc tacctcgag
                                                                      979
<210> 1682
<211> 548
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (4)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (37)
<223> n equals a,t,g, or c
<220>
<221> SITE
```

```
<222> (56)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (548)
<223> n equals a,t,g, or c
<400> 1682
tgtntgaaat tgtgaccgga ttaacaattt cacacanaaa cagctatgac catgantacg
                                                                       60
                                                                      120
ccaagctccg aaattaaccc tcactaaagg gaacaaaagc tggagctcca cgcggtggcg
gccgctctag aactagtgga tcccccgggc tgcaggaatt cggcacgagt gtgcatatat
                                                                      180
gtgcacgtgt gtgcgagtgt gcgtgtgcat gtgtatatgt gcgcatgagt gtgcatgagt
                                                                      240
gcaagtgtgc atgtgtgtat gtgtgcaagc gtgtgtgcac atgtgcttgt gtgtgcatgt
                                                                      300
gtgtgcaagt gtgcatgtgt gcgagtgtgc atatgtgcat tgtgtgcgtg agtgtgcgtg
                                                                      360
tggtccgtgt acacatctgt ccatacatgt gagcttgcat gcacatgtga gcatgtgagt
                                                                      420
gtgcatgcat gtgttgtgtg tgtacgtgtc tgcacgttgg tgtgtgtatg tgtgtgcctg
                                                                      480
                                                                      540
tgagtgtgca gagaggccct ggcgctcgag ggggggcccg gtacccaatt cgccctatag
                                                                      548
tgagtcgn
<210> 1683
<211> 975
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (401)
<223> n equals a,t,g, or c
<400> 1683
                                                                        60
ggctgcagga attcggcacg agcttcaatg aaatttatag aaaagactct cacaagtacc
                                                                       120
attgaatata qttttctgat gattttgaga tcgtagtatt tgactgggta agaattccga
                                                                       180
acttcagtga aaaaactgaa ctcaaaaaac tactaaccca acatcaagca gaataagaat
                                                                       240
tattacatgg gactaaagca atgaaagatt atgattttat gacttttttg tttggcacat
                                                                       300
ggcttattet tteatgttte atttteeaca ttaatttttt ttttetttea getatetaea
gtttacggga atatgggaag gtgtactttt gtgtgcagaa ttgaaatttt tttttctccc
                                                                       360
tacctgatcc ctccagagtt tggagactat ttgtgagtat ncttatttca ataacaatat
                                                                       420
                                                                       480
agttatttgc ttacatttaa gaagaatcta ttctctttct aataggacac aattggaaac
                                                                       540
attggccata ttaccaaggc tttgcctgac atgtcctatt ctgagatatg accagattgc
                                                                       600
tctaaggaat taaagttgac tttataaagc caattaaaac cccttggaaa atctatcttg
atatcttgga taaataatta acatggttga tttacaggtg agaaaaaatg tcacttcctg
                                                                       660
agaggccctg gaacctgaat atatttttgg gaaccttgag aagagaagta ttcactcaag
                                                                       720
                                                                       780
tttaaaggta ttacaggcac aatttgaggg tgactcctcc ttggattggc ttcccagcct
caagaggctt tcaaaagttt aatctgagat tccttgtgaa aagttccagc aaagcaaaat
                                                                       840
tgaaaatgag cttatatgat taatcatcat tttgctgtac ttctgtaaat tattaggcaa
                                                                       900
agtataacaa gcctaaaact tattttgcaa acaaattagt tttattgtga ttaactttgg
                                                                       960
                                                                       975
taaaaagggg ggaac
<210> 1684
<211> 481
<212> DNA
<213> Homo sapiens
<400> 1684
ggcacgagga agaccccact cttccctcat gaaccatagc agataagtta tcacccctta
                                                                        60
ccattaagta tccaaaccct tattaatgga aatcatccat tacgctgccc ttgcaggaat
                                                                       120
caccctactt actctactct ttgccatagg aatatatact gtcttgcctc ctgggtggaa
                                                                       180
tttcagacaa aaaaaactca atattcgtaa cctcttgcct cataatcctc ctcatagctg
                                                                       240
gtataatagc caccaccaac agatagtggc ccctcctaaa tgtcctgtct ttgcccatcc
                                                                       300
                                                                       360
tggcatttca cactetteet teactgcate acagaaaace ttteatggte etacecagaa
```

```
catcccaccc tcacagcatt ccttgattgg atcaccaatc ttatatttca aggggattta
                                                                      420
                                                                      480
caggaattca ctccagatga agccgaattc tttaccttta cacttgctct ctgtctattt
                                                                      481
<210> 1685
<211> 825
<212> DNA
<213> Homo sapiens
<400> 1685
gcttacttgg ttcagctcat ggactggctt cttaattctc tgtatgctgg ccttttgttt
                                                                       60
ttttccataa aagcactttt ctttagtttc cataaaatcc attttcagaa accagttgtg
                                                                      120
                                                                      180
caaagcatag aatttttta aaaagatacc tgcggatggt agaggggatg gggaaagttc
tcactatgtg gcaatattaa taaatacaga ttaagtattg ggtatctttg ctatttaata
                                                                      240
                                                                      300
tcctcaggct actcttcact gccctttccc aggttccctc ccactgcaca tcatctctct
gactcctctt tggtgccttc cttctgccat agcttgttct cacatcctga gttttggatt
                                                                      360
tcccccagaa attccaaact ttccaactag gtcatacaaa gcaattcagt tctcttcagc
                                                                      420
ctctattcgc aaactctcct tttgatattc acactcatcc tgttgcttga aggacccttt
                                                                      480
                                                                      540
atttgccata atcaatcttc cttagaaagt agttattcag gctgggtgcg gtggctcatg
                                                                      600
cttctaatcc cagcattttg ggaagccgag gcaggcggat catgaggtca ggagttcgag
                                                                      660
accegecetg ceaacaegga gaaagetegt etetaetaaa aatacaaaaa ttagetggge
                                                                      720
gtggtggcgg gcacctgtaa ccccagctac tcgtgargct gaggttggat aatcgcttga
acccaggagg tggaggttgc agtgagccga tatcccacca ctgcactcca gcctgggcaa
                                                                      780
                                                                      825
cagagcgaga ctctgactca aaaaaaaaaa aaaaaaaaa ctcga
<210> 1686
<211> 455
<212> DNA
<213> Homo sapiens
<400> 1686
ccccgggct gcaggaattc ggcacgaggt tttattagtt tccttggatt gggtttcaac
                                                                       60
                                                                      120
cttctcctqt atctcactqq gcttctccqc catccagatt ctgattctgt gtctgtcatt
                                                                      180
tcggacattt catttctggg ggagttattg aggtagtttg tggaggtaag aagacactct
                                                                      240
ggcttttaga gttgccagaa ttcttgtgct ggttctttct catctgtgtt cactgatttt
                                                                      300
cctttacttt ttgacattgc tgtcctttgg atgaagctat ttgcttttat attctttgat
                                                                      360
gttcttgagg gtttgaaggc agtataaatt gtgtttagtt gattgacttc atttctggat
                                                                      420
gctttcagga ggccaaggct cagcttagca ctcctgagct tcatgctaat gccttgggga
ctgggactgg gcatatggct ttgttctttg acctc
                                                                      455
<210> 1687
<211> 811
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (5)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (6)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (107)
<223> n equals a,t,g, or c
<400> 1687
```

| addennecee | aggctttaca | ctttatgctt | ccaactcata | tattattata | gaatttgtga | 60 |
|-------------------------|--------------------------|------------|---------------|------------|--------------------------|------------|
| aggemeeee | aattttccca | caggaaacag | ctatgaccat | gattacncca | aagctcgaaa | 120 |
| ttaaccctca | ctaaagggaa | caaaagctgg | agctccacgc | ggtgscggcc | gctctagaac | 180 |
| tagtggatcc | cccgggctgc | aggaattcgg | cacgaggetg | gaagtataat | ggaggccagt | 240 |
| tagaggaaaa | gggggaaaag | attcactcta | agtctagatg | ctctagcacc | cacccaggat | 300 |
| atatacaaaa | aagtgcagga | tactcctaat | cttqcaaact | gtggtttgtg | ggactccaaa | 360 |
| gcgcgcaagg | ttccacgatg | ctttctatcv | tottatcaca | tttccttgga | ggagarccca | 420 |
| accttaataa | agagccctgc | vctaacttta | tccctcsqca | tgagatggca | aaggatggtg | 480 |
| ctactaggag | accctcacrt | ctgvrcactg | agagctactt | gccttctcca | ttcctccttc | 540 |
| aagtatctga | gcagctcctg | tataccaact | gctggtctac | aagatggats | ggtccttgga | 600 |
| gatcavgctg | tagcagagga | agcaggctgt | agcccacacg | ccacaaccag | cccctgcct | 660 |
| gttcacacaa | ataaagtttt | attggaatac | agccacaccc | atttcagtgc | atattgtctg | 720 |
| taactacttt | cctgctacaa | tagagagttg | aatagttggg | acagagacct | atggcctgca | 780 |
| | atttaccatc | | | | | 811 |
| gg | | | | | | |
| <210> 1688 | | | | | | |
| <211> 636 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1688 | | | | | | 60 |
| ggcacgagcc | actactgtcc | aacatcaatt | tggaggttct | aacagatgca | ataataggaa | 60 120 |
| aatattaaat | gattgttata | aacaaaatta | aaactatata | tattttatg | gttatgttac | 180 |
| agttcacgcg | gaaaatccaa | aagattttaa | agaaaaaaat | ctgctggaat | tagtaagata | 240 |
| atttagaaga | tggcttgaca | gataatatat | ctgtcaaaat | cgttttccct | tatttecaca | 300 |
| aaaagcatct | agatatagaa | gcagaaaatg | tttttcatta | caagggtggc | adatgitada | 360 |
| tggtgcctag | aataaattta | gcataaaaaa | aacccagtcg | gccaggagca | graggereaca | 420 |
| ccggtaatcc | cagcactttg | ggaggctgag | gcagccagac | caccigaggi | atcagggggg | 480 |
| agaccagcct | gaccaacata | gagaaacccc | atticiacia | tanagagaga | gaattgcttg | 540 |
| catggtggca | catgcttgta | ateceageta | crigggagge | attacactac | agectagaca | 600 |
| aacctgggag | gcggaggttg | ctgtgagacg | agategegee | attgeactee | agecegggea | 636 |
| acaagagcga | aactccatct | Caaaaaaaa | aaaaaa | | | 030 |
| <210> 1689 | | | | | | |
| <211> 1089 | | | | | | |
| <211> 1132 <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | 2022-0 | | | | | |
| <400> 1689 | | | | | | |
| ggcacgagct | tggagcacat | tgccaagcat | ttgtgccagt | tttttctaca | ctggaaaata | 60 |
| aaccctggcc | catgctaatg | aatcaggtcc | taacagcacc | aattggtctg | gttcttcttt | 120 |
| tgctttttgc | attgctgaca | tttcctcctt | ccagctctat | cagggaaagg | aattgatcat | 180 |
| ttggataaga | aacaaaaaa | agtctctctc | tgcttcactg | tgtctcttat | gtgtggtgct | 240 300 |
| actgtactgo | cttaggaaca | agcatagtgt | gtctatttt | agggcaaatg | tgcctactct | 360 |
| atcttcgcca | actaaatctt | tctacatgac | taatttgcaa | gttgaattat | cttggtaaat | 420 |
| aggctgactc | actagcaaat | aatctgcaga | atttatgcat | taggettetg | tagtgaatta | 480 |
| ggtccttttg | tcttgctcag | catgctgtaa | taaactgcag | cagugetetg | gttaataata | 540 |
| aaaaaaaaga | aaggcaagga | agagaagtta | ttccaaacac | acgaagagte | tttctttaga | 600 |
| atagttagtt | atgatagaga | tatatatage | aggitalati | gagagacacg | gcaatgactt | 660 |
| aagtcaaata | aggaaatgaa | ccatgatata | aatayatata | gtatatatat | atgtgtgtat ttatctccta | 720 |
| atgtaagata | tgttttgtgd | tatagttaga | taatgattta | tcacaaaato | tacataacaa | 780 |
| aatgagttaa | . cggaataatt | atasttassa | . caaccatttat | aaaatraatr | tgcatagcaa aattgcaatg | 840 |
| tcagtatcca | . acayctayta | gicacicady | ctccccttct | actateceta | ctccctctat | 900 |
| acttatact | , attoucoutt | araaaracac | atctatactt | catagetgta | gaaaaattct | 960 |
| +++++ | , accoaglige | ataatttaaa | aagaatgcca | aattatttat | acctacaggg | 1020 |
| ataatgacco | r actaaattt | tttttcatat | atgtgcgtat | gtgtatatct | atgtctgtat | 1080 |
| gtatagteta | actadactic aatattattg | tccaatcato | gcagggatta | tggttgtatg | ta | 1132 |
| gcacagcece | | | 5 555 | | | |
| <210> 1690 |) | | | | | |
| <211> 1062 | | | | | | |
| | | | | | | |

| | <212> DNA | | | | | | |
|---|-------------------------|--------------------------|------------|------------|------------|------------|--------------|
| • | <213> Homo | sapiens | | | | | |
| | | | | | | | |
| | <400> 1690 | | | | | | CO |
| | | ctttggtagc | | | | | 60 120 |
| | | agccggctct | | | | | 180 |
| | | ctattaataa | | | | | 240 |
| | | ctggcccca | | | | | 300 |
| | | ttctccactg cccatgagtg | | | | | 360 |
| | | acgtgcgctg | | | | | 420 |
| | | tcctctcttc | | | | | 480 |
| · | ggatccaata | taagctataa | aaggcagcct | cacaagtgct | gagcagggga | ggaagatgga | 540 |
| | gagggtctg | caggggcgac | taaagattcc | cagcattaaa | ggcaactgct | atctatcaag | 600 |
| | | catctaacgg | | | | | 660 |
| | | agtgtactat | | | | | 720 |
| | | taaatgtaaa | | | | | 780 |
| | | taggagacag | | | | | 840 |
| | caccaaatac | cagcagacct | tcactgcctc | tataggtcat | gagcagggtc | aacaggtcaa | 900 |
| 1 | gggaggctta | aaggactcag | tacaggccag | gcaccggggc | tcacgccggt | aatcccaacc | 960 |
| | | caaaggtggg | | | | agcctgggca | 1020 1062 |
| | acatggtgaa | atcccatctc | tacaaaaaaa | aaaaaaaaa | aa | | 1002 |
| | <210> 1691 | | | | | | |
| | <210> 1091 <211> 675 | | | | | | |
| | <211> 0/3 <212> DNA | | | | | | |
| | <213> Homo | sapiens | | | | | |
| | 12201 1101110 | 235-2 | | | | | |
| | <400> 1691 | | | | | | |
| | | ttggaattta | | | | | 60 |
| | | actacctgtt | | | | | 120 |
| | | tgggagtctg | | | | | 180 |
| | | gttttttatc | | | | | 240 |
| | | caggccccat | | | | | 300 360 |
| | | ggggcaggga tcttcgattt | | | | | 420 |
| | | tttcttgaac | | | | | 480 |
| | | tgcttaaata | | | | | 540 |
| | | tcttgatatt | | | | | 600 |
| | | ctctgtgcaa | | | | | 660 |
| | tatactcgtg | | 3 | • | | | 675 |
| | 5 5 | _ | | | | | |
| | <210> 1692 | | | | | | |
| | <211> 835 | | | | | | |
| | <212> DNA | _ | | | | | |
| | <213> Homo | sapiens | | | | | |
| | <400> 1692 | | | | | | |
| | | cgtgccgaat | tcaacacasa | adaaddttca | atctcaattt | agctgtagtc | 60 |
| | | ctcacacage | | | | | 120 |
| | | ctctttccag | | | | | 180 |
| | | gaacctatta | | | | | 240 |
| | | ggtttcttgc | | | | | 300 |
| | ctgacttctg | tctccaacct | ccagacccag | acttaaaaga | ctcatgtgat | tagggcaggc | 360 |
| | | ctcttccttt | | | | | 420 |
| | | tcttccacgt | | | | | 480 |
| | | cttcatcccg | | | | | 540 |
| | | acgtggatac | | | | | 600 660 |
| | | attttcataa | | | | | 720 |
| | | taaaaaatca aattatgatc | | | | | 720 |
| | agillyicig | aattatyatC | ccaacactac | ccagigging | LLLACACILL | cceggiatic | , 00 |

```
835
cttttttccg tctttttatt tgcaaccttt ttgagatact ttgttttata agtac
<210> 1693
<211> 598
<212> DNA
<213> Homo sapiens
<400> 1693
                                                                       60
qqcacqaqcc cattgqcact tattgqttcc actgqccagt ccaccctacc caaggacagt
                                                                      120
gtcccctcct ccattgtctg ctgccatatt tgattcctct ctactctatt atgggtcagc
aggggcgggg gcccactgtg agctttcctc atgcccttgg cctcagcctt ctgagcagac
                                                                      180
                                                                      240
acctgttcct acttgtcttg gtgcccaggg tagcaggagg caaagtgcac tcaggacccc
                                                                      300
ttaactctaa gattgtcaaa caacgacaat ccccttgggg ccagtcattg ggtgggttca
                                                                      360
tggttccttc tgagaaaccc catatgcact tcattctttt catttcccat gctctctctt
                                                                      420
ttggcctgaa gagagtattt ttccttagaa gaagcaagta gttaaaaaaat attttcttct
                                                                      480
tttctttqac ctaqaqctta acaaaagaca aaactcagat gatgaagtac ttaacatctt
                                                                      540
ccttctttct ttcctgctga cttgatgact ctgctttgga gcagtggggg cctcagggtc
                                                                      598
gcagtggaga aagccatggg ccagtgggag gtgaaacgga gccaaaggtg ggagaggg
<210> 1694
<211> 1445
<212> DNA
<213> Homo sapiens
<400> 1694
ggcacgagtc agtacacata tgcattgcct aacgatcaag tcagggtatt tagcaaaccc
                                                                       60
gtgacctcaa atatttatta tttctttgtg gtaaacactt ttagaatcct ctcttttagg
                                                                      120
aattetttgt atagttteaa ggettetgee aceteeacag aatgettttt ggttetetet
                                                                      180
gtgatctgca cagtgcattt tttctcattt catctactgc ttgtcctaca ctttcatttc
                                                                      240
ttcatagcac tcctgatgta tttcaaaatc tttaaaagca ttactggtaa tcatcataat
                                                                      300
aataataatg aggctataac attttccata ccacagtctt agaaatcatc tagtttatta
                                                                      360
cgttcaaaaa atttcccaaa agaaggccta ccaaacatgt aataagccta aaaatgtatc
                                                                       420
aggcactagt tcagaggctg catacaccaa tctgatgctc ataaactcat tctagctatt
                                                                       480
tgtacaatac aggctttctt ctccaaggtt tccatagagt cctagaggaa ttattagaat
                                                                       540
                                                                       600
cctgagccgg aattaaatga aatgagtgtt aaactgtgat ctggtaaatt gaggtagatg
                                                                       660
gtgcaaacag ctgattgtta aaggaaagta tcctcaagcc tcacagttgc agggtctgtt
                                                                      720
ttataatctc atatcctagt tttgcctatt tggccattga aaaccaatcc aaacagcctc
                                                                      780
tttaagtgac agctagattc aattccctgt tgaggtgttg ttgtttaacc ctctctccag
agagetteag tgggattgaa aaataettgt eeetggaget acagtaggaa tgetetatga
                                                                       840
                                                                       900
tttgtgcata atacatatga taatctgagc tttaaattaa tccctaaccc ttctggataa
                                                                       960
tacgctgcag gtaatttctc cttcctatat tacattgcgg aagctagaat tcagaagtat
                                                                      1020
agtcttgctc accttttaag gataatagag cttcaaaaca gtattgcagg aagcaaagtg
gaataaacag aaaactgtca aactagatgc cactactgtg agttgttgaa aaggttaaat
                                                                      1080
gtcagaagca aatataattg gatgactgga atgaatgact aagtgctttt tacactaagt
                                                                     1140
                                                                     1200
tgcttgtttc acaagcaacc ctagaccctt agaaacaggg ttgatgaagt caaagggacg
gccattctgt cttgtctttc cccttctcag atcagcagaa aagcagcaga aaaacatggt
                                                                     1260
                                                                     1320
gttggattgt agtccctaca gatttggtac ttccaagact ctcccactcc agcaaaaaga
                                                                      1380
aaggacactc ataacctttc cttttttct actccatggt aaaaatctag agatgggtat
                                                                      1440
agtgcaaaat attcagattt tggagaatta ttatccattt tgtacttaaa aaaaaaaaa
                                                                      1445
aaaaa
<210> 1695
<211> 888
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (380)
<223> n equals a,t,g, or c
```

| .400- 1605 | | | | | | |
|-------------------------|------------|------------|------------|------------|------------|------------|
| <400> 1695 | tttttttag | atcaaggtga | gtttattgtc | caaatagcat | aacctaatto | 60 |
| cattcaaaac | cattttcaaa | tccatcttta | aactagtcag | aaaacaggtt | attattttt | 120 |
| | | | tcttaaaagg | | | 180 |
| | | | acttcctaaa | | | 240 |
| tcatgctact | tatcagcact | ttctaacatc | ctgaccaaac | agacacccac | acctcttata | 300 |
| gagtacactg | tgagagataa | catggacttg | atatggcatc | acacttgttt | taaagcaaaa | 360 |
| aaaaaaqaaa | aagaaaagan | aaaaaaagt | ccaagacaag | aaactatata | actgagmgag | 420 |
| aggagagaga | gagagatctg | aggtacatga | tataagggtg | atgaacataa | tggaaaaaat | 480 |
| ccaatggccc | gatgatttgc | tggggatgta | agagttggcc | agcmgttaag | ractaaaccc | 540 |
| aattaaaaww | aaaatwgraa | ctttgktttt | carggacagg | cacctgtcaa | aagacattgg | 600 |
| atactgtaat | ggctacagtc | agtaaggcac | tttatttccc | caaagtaggc | tgcaggcgaa | 660 |
| gggatgcagg | ctgcagctac | agcatgcacg | tacacatttg | ctgatggctt | ctcaaaacct | 720 |
| gagccgagaa | tagggtctga | tagcccagcc | aagtttaaaa | gcagacacac | acgaatgtag | 780 |
| tatcgttgtg | cctgaaatga | ccattctggg | ttgtttagaa | tccagaatca | tcaaaagcca | 840 |
| tgtggtatga | ggaagtaata | aatatcctct | tgaatcttct | ctcgtgcc | | 888 |
| | | | | | | |
| <210> 1696 | | | | | | |
| <211> 642 | | | | | | |
| <212> DNA | assiona | | | | | |
| <213> Homo | saprens | | | | | |
| <400> 1696 | | | | | | |
| | gtgccccca | gtcccggaag | gtgtgtgtct | ggcaacctgg | acttaccctg | 60 |
| ttaaacactq | gcagcatcat | atacagtttc | tcttcttgtt | ccttctgagt | catgtgccgg | 120 |
| ggaggatggc | acaactccqt | gaagagccgg | cggaggtgca | tcagtcctaa | ggcgttgtct | 180 |
| tataaactac | actcctcctg | cctcggccgc | cccatgatcc | tcttcaccat | gttcatcttg | 240 |
| actaattaat | gagacgcact | tctaattctg | taggaaaatg | tcaatacatg | aacagtcaaa | 300 |
| acatcatcat | cttgactagg | tcaagcatgc | atgtaagagc | ttataagaaa | tttgcaaaat | 360 |
| agaaaattct | gtctaaaata | tatctttcta | cttctttaaa | cagaaaagac | agagaagcaa | 420 |
| aatttgataa | atccccctga | agggcaaatt | atgaatctca | gcattggaag | ttcttactca | 480 |
| ctttgccaca | atttgtataa | aatgtaaaac | attaatcaga | caagtaataa | atgtttccaa | 540 |
| | | | aggcgccggg | | cacacctgca | 600 |
| atcccagcac | ttttggaggc | cgaggccggt | gaatggctcg | ag | | 642 |
| 040 4605 | | | | | | |
| <210> 1697 | | | | | | |
| <211> 826 | | | | | | |
| <212> DNA | assissa | | | | | |
| <213> Homo | saprens | | | | | |
| <400> 1697 | | | | | | |
| | tacttttttv | ctcttagtgt | ttaggaggtc | aaagtctaaa | agcaaggtgt | 60 |
| | | | aggggagawt | | | 120 |
| catctaaagg | rtgtctgcat | tctatggstc | atggactcct | cttaatatca | ctccaacttc | 180 |
| ttggtcccat | tatcacatat | actaccattt | ctgatcccac | taccttcctc | ttataaagac | 240 |
| tcttgtgatt | acattgggct | cacccagata | atctgagata | atctccccat | ctcaaagtcg | 300 |
| ttaacttgat | cacatttgca | aagtcccatt | tgccatgtaa | gataacatat | gaaatgttct | 360 |
| | | | atgatgaagg | | | 420 |
| gatcttaggt | tgcaatgatt | ttgaagactt | tttgaatata | ggcacgggaa | gcactgacct | 480 |
| gctgtggcct | ggacttccat | ggttcctttt | ttgaaatact | agaagataag | aatcattgat | 540 |
| agccatctta | gaatcgttct | gccactatgt | acatgtgtat | gaatgtgttc | tcttgtgtgt | 600 |
| gtgtgtgtgt | ttgtatgtat | gtgtgagata | tggttagtgc | aaaagttgtt | gtggtctttg | 660 |
| ccattaaaag | taatgcaaaa | actgcaaata | ctttttcatc | aacttagtag | ttgttttcag | 720 |
| | | | cttacaatgg | | tggctcaagc | 780 826 |
| ctgtaatcct | agcactttgg | gaggctgagg | caggtggatc | actcga | | 826 |
| <210> 1698 | | | | | | |
| <211> 2099 | | | | | | |
| <211> 2035 <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |

```
<220>
<221> SITE
<222> (644)
<223> n equals a,t,g, or c
<400> 1698
gaattcggca cgagtgaagt tgcaagttat tttacttaga tgtttaagaa aggtgatttc
                                                                      60
tagaaagcta gaaacttggg gcactaggtt tccaatgatg atacaactgc tatttctatt
                                                                     120
                                                                     180
aaatgtctat tctagtccca ttgcaacatg cttgatatac ataatctcct ttattgctcc
                                                                     240
aaacacatct aaaaggcagc attatcttta ttaccagatg aggaaaatgc ttagaaatac
tttgataatt agatgtttgt cttattttat gttcttgtaa tagaagtata tttatttaac
                                                                     300
                                                                     360
tcttttttac cagttaattc tggccttcct tgacagtgga atttgaattg gcatttggta
                                                                     420
ggcagatata atacaactgg tataagttat tgatkgatar aakcattcca agaagamaat
agaaatattt atgcaattcc aaaatgtttt taaaatatta attatgctta aaatatgtaa
                                                                     480
                                                                     540
gggaagagtt cttatggctt atagttaaac taaacttttt ttataattgt atttcttgtt
                                                                     600
ttaaatcatq atgcaaaata acaaagagaa tattgtgttt aattttttag tattaaatga
                                                                     660
ctaaaagtta ctgggattta ctaataagat ttatgattcg cctnctctta ccatgttata
                                                                     720
gaatgagtag aatgagtgtt tatttccaat atggtatact atatgcagca aaaagaggct
                                                                     780
acgttagtaa tgaataataa agtcagagaa agtcttcatg atgagcaata tttcagttgc
                                                                     840
caagtctgtt gcttttctta aatccattta tttttactat tttgctactg tttccctgtg
                                                                     900
gagggtttaa tacttctatt ttcttcctta accaactcga tagttaaaga ttatatggag
                                                                     960
aaatgtactt aagtgtaaat ggaaatgcct ggctgtgaaa gtctattggc ttttcttaaa
                                                                    1020
attaggagaa tatttatagt cataaaaaaa acagagatgg ttgattacaa aggagagtag
                                                                    1080
actatgaget taagtgaget acttgagaaa actttttgte actttateae atgeaeatgg
                                                                    1140
cacaaagttg agttgtgatg tgctataatt tgagaaagga gtgattatag catctttctc
attetecege ecceagtace tgataactee ecceaetgaa teaettagga agetettgga
                                                                    1200
                                                                    1260
attgtgtgcc tgatgtacgg caaaactgta cctcccaggt cattgtggat tcaagtaraa
                                                                    1320
gggaraggtg ktcaagctgc ctaaagacaa aacaggtcat agcaaaggca gagcttaagc
                                                                    1380
tagagatcta ggcagataga gaagtggtgg gggcacttgt ggataggttg acagaactgg
                                                                    1440
aaccaaaatc ttattcttag gtgggaggca aagtaattta aaatgatttg gcagattgca
                                                                    1500
gcaggatccc caagaaaagt ctagatagaa acagtgcaca aaagtctgtt tcgctgagca
taaggtaaga atggagcagg ccttcagatg gagtttgaga ttggggtctt ggtccaacag
                                                                    1560
gactaatttc caatgggtct tgtggctttt ccaagggctt acagcaaagc ttacctccca
                                                                    1620
                                                                    1680
ggatataaag ggacaaaacc tctttggact gacaatttct aatctccaag gaaggaggct
                                                                    1740
ggatctctgc cctccagaga atggtctggg catggttttg gggagtgttt gtgaactrgc
                                                                    1800
wgggyacaaa ttcctcctcg gggtcattgc ctccatactc tatttttaca aaattctcat
ttgcgggtcc aaacttctct ctctctctta ggtcctgaca gctagaatct tgacggtata
                                                                    1860
ttttttaaag atgctacatt tcttaagcct agcaacatct tagttgtata aaaaaatgta
                                                                    1920
caggctgggc acggtggctc acacttctaa tccccgcact ttgggaggca gaggcaggca
                                                                    1980
                                                                    2040
gatcacctga ggtcaggagt tcgagaccag cctgaccaat atgatgaaac cccgtctcta
                                                                    2099
ctaaaaatac aaaaattagc tggatgtggt ggcaggcacc tgtaatccca gctactcga
<210> 1699
<211> 953
<212> DNA
<213> Homo sapiens
<400> 1699
ggcacgagag tgatttaacc ccccatgaag atgaggatct ggaaatataa gtaggatctg
                                                                      60
aaactggtct gcagctgcat gcacagaaac accctgtaat gctgcctttg taataaggag
                                                                     120
gaatccatac teteaacagt caetecetga eteteetett eetetteete atetttetgt
                                                                     180
gcatgtagtg gatttactac ggtttatttt cattctcatc agttaggagg aaatagaaga
                                                                     240
aagagtaagt aactgaggtt gaatatgtta acttactggg ctgttttcat taagcaaata
                                                                     300
aacaacaata aaaaaaatct caggctaaaa tgaaccatag gttccatttg tgaaatttga
                                                                     360
tgatacagat aaccttaggt tttcactact atctctatgt atatttccta aatagcaata
                                                                     420
tcagcaaaac ttcacaggca ttggggtggg taataatatt tctttaaaat actcaggaga
                                                                     480
agtgaaagtc attcaaagga ctttaattgt catggagtca tccacttccc acttaacttt
                                                                     540
ttctgcctca agtcccctct acgcagactg tctaaggcgt gatttaggtt tttggaagca
                                                                     600
                                                                     660
gctggtggca gcataaatct ggccagacaa ggagggtgct gtggaactgg cagtacaccc
tgagtgcccg aatgtcacat gaaacactct gcaatgaagc aagcagggtc tactaggtgc
                                                                     720
780
```

| cagacataca | attcaagtgt | ggtttcaggc | ccagcatggg | tgatgttaga | aaggccttgt | 840 |
|-------------------------|------------|------------|------------|------------|------------|--------------|
| | | gtctgaggca | | | | 900 |
| gcatcaaaac | aagggaatgc | tgtttttcag | tgtccctggt | gattcttggt | ata | 953 |
| | | | | | | |
| <210> 1700 | | | | | | |
| <211> 1559 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1700 | | | | | | |
| gaattcggca | cgaggaatat | cggaagctcc | ctatggcact | gtcagtgtcc | tcatccccat | 60 |
| cacccacacc | atcatcctca | tcttccttga | ccttcttctt | cttgaagagg | gagctgcgtt | 120 |
| tgttgtctga | ggccagcttt | tccattttgt | actcagacat | cttctcccta | agctccatct | 180 |
| | | ccaagttcct | | | | 240 |
| | | ctcactttgc | | | | 300 |
| tggtgttgca | ggacagcaca | gactgcatgt | cagagetggg | tettgeetgg | ctctgaggca | 360 |
| | | gagctgctgt | | | | 420 |
| | | actgccttca | | | | 480 |
| gcagcatttc | attttgcttc | tgagcaaggg | tctcactgac | tacattggca | atccagttct | 540 |
| | | gtgtctccag | | | | 600 |
| | | cccgctatgt | | | | 660 |
| | | gacgtcgtgt | | | | 720 |
| | | atgctcccgc | | | | 780 |
| | | agcgtctgcc | | | | 840 |
| | | gagtcctccc | | | | 900 |
| | | tggtgtttca | | | | 960 1020 |
| | | cctactgcct | | | | 1020 |
| | | tgaaatccaa | | | | 1140 |
| | | ttcctgctgc | | | | |
| | | tcccgcaccc | | | | 1200 1260 |
| | | gcgtggtacc | | | | 1320 |
| | | caggtgctct | | | | |
| | | actccagctg | | | | 1380 1440 |
| | | tctcgctcag | | | | 1500 |
| | | tctcctcctc | | | | 1559 |
| gtacctctcg | ttteggetet | gccactcctg | gatgateete | tecaegteet | egreerega | 1339 |
| ×210× 1701 | | | | | | |
| <210> 1701 <211> 608 | | | | | | |
| <211> 008 <212> DNA | | | | | | |
| <213> Homo | canienc | | | | | |
| \Z13> HOMO | saprens | | | | | |
| <400> 1701 | | | | | | |
| | gaattgtgag | cggataacaa | tttcacacag | gaaacagcta | tgaccatgat | 60 |
| | | cctcactaaa | | | | 120 |
| | | ggatcccccg | | | | 180 |
| | | gagaggaggg | | | | 240 |
| | | cctctcctgg | | | | 300 |
| | | ccaaggggcc | | | | 360 |
| | | atgagtccat | | | | 420 |
| | | gcactaaggt | | | | 480 |
| | | aggctatatc | | | | 540 |
| | | agtattcaca | | | | 600 |
| gcctcgag | | | _ | | | 608 |
| • | | | | | | |
| <210> 1702 | | | | | | |
| <211> 1157 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1702 | | | | | | |

| gggagggt | tcatcctccc | cctgtgcctg | aacacatttc | tgttctgctc | actgaatgac | 60 |
|-------------|------------|------------|------------|------------|------------|------|
| addcadadaa | agggagagaa | atccccatag | aaagaagagc | atacagccaa | gtttgcgttg | 120 |
| actatacttt | ctgctctcaa | tattcttagc | ctgtcttaac | aatcattctt | ctgggtgggc | 180 |
| atacatoctt | ttctttctca | tgaaaaactg | ggcatctcag | agcacggact | aaaacccact | 240 |
| accaaggetg | tacctacate | tgactcatca | ccctcaaagc | cctcctcatc | ctcctttctc | 300 |
| attcctcat | tttcctcact | agccttggta | gagcactttg | cccagcatgg | tgcttggctc | 360 |
| atcattaagc | ttcctgaaag | gacccacatc | atcatcactt | cctccatgaa | ggcttcaaca | 420 |
| acatccaage | ctaagttgct | ctgtgtttcc | acccagtgct | cccacatcct | gttttgctta | 480 |
| tagatagas | cttttaagga | aaatctgttt | acctatccat | cttccacaac | tctccattcc | 540 |
| gaggagagaga | acactotcao | tcaccagcag | ccttctctat | ctttatatet | ccatgcagta | 600 |
| cagcacacaa | acactgccag | tggattaatt | catctatcac | caagggcaca | caagggagcc | 660 |
| agggagaatt | adaaacaadc | agcttcgagt | cagacagete | tgaatgtaac | ccctttttt | 720 |
| acgyagaacc | gaaaaaatc | acttaaacct | ttagattttc | aatcacctca | tatataaata | 780 |
| atataata | accasactos | ctgagacaag | tctcagtcat | tttaggggtt | tatttqccta | 840 |
| acytcaacca | aggaaagcga | ggcgcggtgg | gtcatgcctg | taatcccagc | actttgggag | 900 |
| agttaaggat | acccaygong | tgagatcagg | agttccaage | caaccaggtc | aacatggtga | 960 |
| gergaggegg | gtagtaaac | tacaaaaatt | agccagge | agtagtagac | gcctgtaatc | 1020 |
| aaccccgttt | ccaccaaaac | ggcaggagaa | tcactggeac | caddadata | gagattgcag | 1080 |
| ccaactactt | gggaggerga | gcactccagc | atagagaaca | gaggaggag | ccatctccaa | 1140 |
| | | geactecage | Ctgggtgata | gaggaaggee | cegeeeeaa | 1157 |
| aaaaaaaaaa | aaaaaaa | | | | | 1137 |
| 040 4500 | | | | | | |
| <210> 1703 | | | | | | |
| <211> 742 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1703 | | | | | | 60 |
| ggcacgagtg | tgtaggtcac | atttaacacc | agtatgaaag | ttagaagatg | aaaatactaa | 120 |
| cagtaagtat | agttacaata | attttaatgt | gtgcacttaa | taaaaataca | taaataagga | |
| caatatcctt | tccatttaca | ttttatatat | ttatgtttt | tcatgttcta | tttagtgtet | 180 |
| tttttgtttc | aacttgaaga | cctgtattta | gcaaattttt | tttgtggtag | gacaggcgta | 240 |
| taatctttac | ctctccattt | ctgaatgtca | cttttgtgga | gtgaagtact | cttggttgac | 300 |
| agacttattt | tatttcagta | ctgtgaatac | atcatccatt | atttctttcc | tgcaagattt | 360 |
| ctgctgacag | aatactgata | tttttctgca | gcttcccgta | tatgtgatat | ttcacttttc | 420 |
| ttctgctcct | ttcaaaaata | tcagtttgac | tttcatgttg | gataattaga | ttataatgtg | 480 |
| tctcagcaca | gatctcaaag | tgttcagctt | ctttggggtt | atttgagcag | catggatatg | 540 |
| gatgtttatt | ttcctttcta | gatttgggga | attttatgtt | attagttatt | taaataagat | 600 |
| tttcttcccg | ttttccctct | ctgctccttc | tagaacttcc | ataatataga | tattgtttca | 660 |
| cttgatggtg | tgccgtaaag | caagtaacct | ttcttcattc | ttttttcttt | ttcctctgat | 720 |
| tagataattc | aaataatgtg | CC | | | | 742 |
| | | | | | | |
| <210> 1704 | | | | | | |
| <211> 303 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1704 | | | | | | |
| ggcacgagaa | aatttccata | taaagaaggg | tctggtgtag | aaatatggtg | aagggttgca | 60 |
| agaggttgct | aaaggttgtt | aacttgatgt | ttcatttaca | aaataaacac | tctgtttata | 120 |
| cttagtgtat | tacactttcg | tattgcttgc | cctgggaaat | atgccagggt | tggctgtgac | 180 |
| tagcccaact | tgggttgtta | ggttcactaa | caatccagtc | actgcggcca | gcaggatgga | 240 |
| ccatactact | tggttagtac | tgatctcagg | ctcatccctg | gaactgagac | tgaggtcagc | 300 |
| CCC | 55 5 | _ 33 | • | | | 303 |
| | | | | | | |
| <210> 1705 | | | | | | |
| <211> 1162 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | _ | | | | | |
| <400> 1705 | | | | | | |
| | | tccgaaatgg | ggaaagaaag | gccaggcgca | gtggctcacg | 60 |
| | · · | | | | | |

| cctggaatcc | caccactttt | taggagggg | aggtgggcag | atcccttgag | gtcaggagtt | 120 |
|---------------|------------|--------------|--------------|---------------|--------------|------|
| cgagaccagc | cagcaccccc | taaaaaaaa | ccatatataa | taaaaataca | gaaattagcc | 180 |
| cgagaccagc | etggedaada | | ataataaaa | aactaaaaca | ggagaatcac | 240 |
| agccgtggtg | tcaggtacct | gttgtcctgg | ctactcggga | ggccgaggca | tacaacetaa | 300 |
| ttgaacccgg | aaggcggaga | ttgcagtgag | ccaagatcat | getgeagtae | cccagcccgg | 360 |
| gtgacagagt | gagactctgt | ctcaaaaaaa | taaggaaaaa | gaaaaggaag | gaaayayccc | |
| acctcactaa | tttatgagcc | tcaggccagt | aactcaaact | acgtttggag | actgtggctc | 420 |
| tatttctage | cacagggaa | aaaaacctat | gaacaaacag | gcacagcccc | tgcctccacg | 480 |
| aagtgatgac | ttcatgccgc | agacagcgaa | ccctcacctc | ccaacagatg | cctcagtgac | 540 |
| tgcgggggaa | 22444 | acadadddc | agatgttgag | actgaaccat | tcagggcctg | 600 |
| agctgtctgg | aagccacgaa | acagagggco | agatgatgag | ttaggaaaga | gtggaacatt | 660 |
| agctgtctgg | aaggccgggg | caggicectig | tatasaataa | agggttcat | cttatcctct | 720 |
| ccagaaagca | agagcctcag | gtatgagtgc | tetgagetee | aggggtttat | atassagat | 780 |
| ataaaggggg | gaatgacaca | gcgcagttgc | tggggaaaac | ageggggeee | ctcaaagagt | 840 |
| cacacacaga | gttactgtca | ttaccaacca | gcgactccag | tcctagggat | ctaccaaaag | 900 |
| aactgaaaac | aggcactcgg | caaacacttg | cacacacgtg | catagcagca | tgagtcacgg | |
| cagccgaaag | gcgcaaacaa | ctcgatagcc | atcaatagat | gaatggataa | acaaattgtg | 960 |
| gccgggcaca | gtggctcacg | cctggaatcc | cagcactttg | ggaggctgag | gtaggaagat | 1020 |
| acettasace | carrantttr | agaccatctt | aggcagcaaa | gtgggatgcc | catctgtaaa | 1080 |
| agettgaage | ttttaatta | actagacata | ataacacact | tgtagtctcg | ataactcaaa | 1140 |
| aaaaaatttt | tttttaatta | gctgggcatg | geggeaeaee | cgcagooog | 5-5555 | 1162 |
| agactgaggg | aggaggatct | Ct | | | | 1101 |
| | | | | | | |
| <210> 1706 | | | | | | |
| <211> 759 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| 1213- 1101110 | 20.12 | | | | | |
| <400> 1706 | | | | | | |
| ~±~~~~±±±± | | ++++++++ | FEEEEEEEEE | ttgagacgga | gtcttgctct | 60 |
| Clegagitti | | ~t~~t~~ | cttaactcac | tgcaacctct | acctcccaaa | 120 |
| gttgcccagg | etggagtgca | gtggtgcaat | enteggeteae | agtagatgga | cataccatca | 180 |
| ttcaagtgtt | tctcctgcct | caacctcccc | agtagetggg | actacatgca | cgcgccacca | 240 |
| cgcccagcta | gtttttgtat | ttttagtaga | gacagggttt | taccatgttg | gecaggetgg | |
| tcttgaactc | ctgacctcag | gtgatccacc | ctcctcggcc | tcccaaagtg | ctgggattac | 300 |
| ttttttttt | atttattttg | gcttctgctt | ttcacatgag | gggcttttct | ccaatatctg | 360 |
| atgateette | attotccatt | catcttcaca | agtaaggcac | caaaatgcta | actggaaatc | 420 |
| acaaaatctc | totatoccta | ggcaagettg | tgaactaatg | aagcatcact | gcaggatggg | 480 |
| acaaaacccc | attagactaa | adcaddadtc | cccagagttc | agtatctgag | atggtttctc | 540 |
| gaagetaggt | gcccactgg | agcaggggcc | aatacaacac | atatgaaaat | gaatcaattt | 600 |
| ttgggctgat | cagtttetet | yaayacyaay | ggtgcaacac | tatassacat | acctgagtct | 660 |
| catcttcaga | gctacctgat | attttcgatt | detgateett | tctgaagcct | accegageee | 720 |
| tctgaggttc | tgtggaataa | attagtttgc | tccttggccc | taccctaact | CCacacacac | 759 |
| cgtgcccaca | tttcagcttt | ctcttgtcct | cgtgccgaa | | | 133 |
| | | | | | | |
| <210> 1707 | | | | | | |
| <211> 933 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1707 | | | | | | |
| caacacaaac | teataccase | tataataata | ccatcacact | tgtctgatga | ggatctgttg | 60 |
| cygcacyayc | cegegeegae | accascacac | cctatctggg | ratttttac | acttatagtt | 120 |
| grigacting | acaytyataa | togaacacag | caaaatatat | atatacaaat | atacaaatac | 180 |
| tgggggtttg | aagtactggc | Lagaagergg | turanta | . taannaa | gtgcgagtgc | 240 |
| atgtgcaacg | tgtgcgtgca | agtgtgagtc | tgcacttgtg | Lycadyayaa | tgtgtgtgtg | 300 |
| tatatatta | gagatttgga | cttgaaaatt | ctagctcagg | , tetttggggt | agtgtttgac | |
| ctgaactctg | aaaggcaagg | gtcccagact | . ttcctgggat | : gatgggaact | gggcacccca | 360 |
| atgagetegg | ttgtgagtag | acggggtggg | ccaccgaaga | ı gaagacagag | tgggcctgta | 420 |
| adaccaaccc | gaggtaccca | cagtggaggg | tctacaggct | gatttgggag | gtggtggttt | 480 |
| atecetatea | tcaccttcta | tettagttag | gaattcacct | tcacacttcc | agaaactgcc | 540 |
| acaccigiag | caacaaataa | gatttatata | gtagaataan | ctgtttgaac | aaagatctgg | 600 |
| aayaayaatg | ctgctgctca | 2500000000 | tatetteeee | , toggadagtes | acgatacttc | 660 |
| aggttgcaca | accetgtgte | . accordgatt | . taccingggg | , cogggageco | acgatacttc | 720 |
| ttgtgctgtc | gtttctccgg | r ccgtgtgaag | rtaccaccto | gryagrygro | : ataagttagc | 780 |
| gtgtctaaat | gcactttgaa | atcctaggat | gaaaaagcca | ggeeetgtet | tttttccttg | 840 |
| tctaagcacc | atccttqctt | aggagagaca | cggctgtggc | : tctcaggctg | , tggggcaatg | |
| ttctgcttat | aatgtttcaa | gaggttcaaa | gcgtgcaggc | cccatgctcc | gtgagagcct | 900 |

| tgacctgggt cagcaggggc ggctgggctt gac | 933 |
|---|--|
| <210> 1708 <211> 655 <212> DNA <213> Homo sapiens | |
| <pre><400> 1708 cccccggct gcaggaattc ggcacgagaa gatacgacga gattaaaaat tttgcctaag gtcacacagc taatggatgg tggaagtagg atactaactc agacagtcct gctacacaca gatatgcaaa taatcctgat ttatagttat ttggtcagag ggatggattg tatatttat gaatgattc agaccctct ctactccctc ttactttctt tctgtttata tcactgtcaa ttaactttcc agtagtagag gctcagagat ggtaaaacta ccactaaatt tatagaaagt tgtatgaatt tcttaagaa gtgggaatac ttctcctttc ctcagttttt tcctatttat ggtcattgca gtaatttcta tcatcctttg cagctttgaa atcacttctt cacatgtaaa cagctcaccc tggtgttgcc atggagatt atatacaatgc catgagccag ggcctaattt gcgcattctg ctgattaaca ggagtatttg ctaatccctg ccaagctctc tcatccactg ccatgactaa tctcaccggt tggcgatgcg tggaattcat gaatgctaga aacccatcat cttaggttat ttaacacttc aattctgttc agtaacaact taattaagtc tcgag</pre> | 60 120 180 240 300 360 420 480 540 600 655 |
| <210> 1709 <211> 366 <212> DNA <213> Homo sapiens | |
| <pre><400> 1709 ggcacgaggt ttaacacctc gcagtaaggg attcttcaca tcccagaagt agctaccctg catcttaaac agtatgctag gttagattct tgcccgtttg ctgttcctga taatgccctt taactcacac aactgagctg ttgttagtta ggatctacgg ccacagaaat agtatgtctg aaataaacat aaatatgagt aaaatccagg cataccccct aaatcatgcc cttcactttc ttcctgtttg taaatctttt gtaagccttc aactttttt ctttttaagc ttgtagccat ttctttttga atgactctta gcttactgtg tttccagggg ttgaggagcc atgtatctgt gggata</pre> | 60 120 180 240 300 360 366 |
| <210> 1710 <211> 621 <212> DNA <213> Homo sapiens | |
| <220> <221> SITE <222> (616) <223> n equals a,t,g, or c | |
| <pre><400> 1710 attcggcacg agggaggaaa gagggtggaa tctggacagt atgaaggatt tgtattgtac ctgtaatgtt tgatgtctga agctgggtgg tgggcatggc tgtttgttat tctccatcct tttggtatgc ctgatacatt tcataataat tttaaaaagg acaagactac tgcagagaaa tgcatagagt gagctctgtt tgggtttta aaatgattcc tacatctatg cttgcagatg taagcaccag ccctggaaaa cattgcaagg gattcttagt aggcccaagc tttgggaaag ggccaagggg gctggggagt tgattaggag gggatacatg cttttcctg ctgccttttg aattttgtac cacacgtagt attacttatt aattaaaaaa taatctgaac tagccaggcg tggtggcaca tacctagtct cagttacttg gaaggctgag gcaggaggat cacttgagcc caggtggttg cggccagcct gggcaacata gtgagaccct gtctctttag aaaaaacagg ccaggcatgg tggctcacac ctgtaatccc agcactttgg gaggctgagg tgggtggatc acctgaggtc gggagntcga g</pre> | 360 |
| <210> 1711 <211> 1611 <212> DNA <213> Homo sapiens | |

<211> 1341

```
<400> 1711
agtacaattc cttttcttgc acagacattt tcccaagtca gtacatctgg gataatagtt
                                                                      60
ctcagagtgg ctgtatatta tattcacatg aagagatttt aaaagttata ccccatgttc
                                                                     120
atcgctttat gttcaaaagt gtgtgtgtgt gtgaatgcat atgtctgtgt acacacatat
                                                                     180
gtagtattta tgcctggcat gtatacaata tgggtccata tatgcaactg agcaggtatt
                                                                     240
ttagaacatc tgatgacctt gtcatttcaa gaactgtggc cacagattga gaaataaagc
                                                                     300
accettteag tagtetgagt attteteaac aaaagtagag acttgeecat cettagteat
                                                                     360
ttctatggra ggagtggcct ctcattttat gcttttatag ggacgtctat tcccagccca
                                                                     420
tagtttatga gcaacattct stcagcaggc wkgaatagtg gctcsctata attaattccc
                                                                     480
ttcttgctcc cccacctctg agagtgagaa ataaaagggc attaaaggga atgtagttac
                                                                     540
aacccacaaa gggaccacat aaaatgtcac cttttggctc aacacattgt tecettegtg
                                                                     600
actcctagtc ctgaatttcc atctcacagg gcaggcagag tgtattgtca gctgagaccc
                                                                     660
aagagagaca cattggcagt caatctgcat gatatggtag gggtattagt taaaacttta
                                                                     720
ctgaaagtta agatctgtgt caaaggtttt tccttgtcct atgtgcatta catggaagac
                                                                     780
agaagaaaac aaggaaaaga gatgaattgc tgttgcaatt taaagtatgg gggcagagag
                                                                     840
ttgagtgtga gctgcagaat ttctatgtga caacatagaa tagtggtgaa gttacttaac
                                                                     900
ttttgtgggc ttcagtcctc ctgcctccct ttgtagcatt agcatcataa tacgtgtctc
                                                                     960
ccaatgtttc agggaagagt aagtgggttt agatatatgt agtgaatacc acagtacctg
                                                                    1020
acatatagtc agttctcagt gctgataatc atataaattg aaagcaatta aaacaccccc
                                                                    1080
atttatette ceatgeataa tttataaage acatteacat catgeaaatt cateeteaca
                                                                    1140
acactcaaca ttcaattaag ataagcatgc actcttgttt ccctttgcac aacttttgca
                                                                    1200
                                                                    1260
agttgaatgg ctggtttggt tagattcaat ccagtgttct ttccattaga gcagctgcca
                                                                    1320
cctagagaag aggacaatgt ttctcccagc cattgaacat gctgcatgtc tctgttgagg
ggccaccatc aaaactcagg ccctgctgtt ctactctagg aggacagatg gtcttaagga
                                                                    1380
atatagggac cttctagacc ggaatcctca caccaaacct ttagtctatg gtaatcactg
                                                                    1440
tttacaaaag tttaatcttg ttcccttctt taaaagtttc agagcattgg tgtttattga
                                                                    1500
cttttttgtt tctttaaaaa agaggacaag ccaggcacgg tggctcacgc ttgtaatccc
                                                                    1560
agcactttgg gaggctgagg cgggcagatc accggaggtc aggagctcga g
                                                                    1611
<210> 1712
<211> 1267
<212> DNA
<213> Homo sapiens
<400> 1712
tgcaggaatt cggcacgagc tcactttgac catgcgatcc cttggcctga gatgcgcttt
                                                                      60
ctatettete tgtetgetea atecetetge ceteceagae ceagetggaa ggteacetee
                                                                     120
cctgtgaagt cttccctgac tcccccagca gaattaactg ccccctctct tgggcttctg
                                                                     180
gctccactca gtttgtcaca ggcctgatga gcaaggatat cttgatgaag gtgataactg
                                                                     240
gccgaaaagc agttggggcg cccaatggcg cagcttcaga agcaccttct gtgtttttgg
                                                                     300
360
gggaaggata gggagtggag gttcacagtc cattccaagg ctgtatgtca agatgacagg
                                                                     420
aaacacatat gcagcttgtc tcaaagttgt atcttgagac tggggagaaa gaaggaaaga
                                                                     480
aaacaaggtt ttaaaatgca gtttgaagcc aagctgcctg cttacagtca gactgcctgg
                                                                     540
attcaaatgg ctaatttcta ccacttcaac tgactagetc tgtggaacat tccagaattt
                                                                     600
ctctattctt ctgtttcctc ttttttcccc cttaatttac attttttgtg ggggggcagg
                                                                     660
taagagacag gatatcgcta tgttgcccag gcacaccttg aactcctggg cttaaacaat
                                                                     720
cctcccaccc caggetteca agtagetgag actacaggea cctgccacca cccccggetg
                                                                     780
gtttcctcat ctttgaaaca ggaagaaaaa caatagcaac cactgttgga gttttaggag
                                                                     840
accaataaac actctttctg ccccttctga gttcagaact aaggaagaaa agcaggtaga
                                                                     900
gatcaaaatg tcatcatcat tgctgacaag agctagactg gaggatgtgg ttgaagtgaa
                                                                     960
aatactttac ccccagtcac taacacagca actgcagaca gcccattacc agggtacagg
                                                                    1020
gcggtccaac ccagcacccc accttctcag aaagttatca gtcagagaaa tcctcctcct
                                                                    1080
gctctgggga aaaggagaat gaaagctaga tagacatgtt cctccacact tggccccgct
                                                                    1140
ggggaatgga ataggaatct cctcctgtcc ttgaaaatat gagaagcaaa aataagtgat
                                                                    1200
tctctcaata ccattttatg ggctcttgag gttgttatga gattaaggaa aaacacagct
                                                                    1260
aaagtat
                                                                    1267
<210> 1713
```

```
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (872)
<223> n equals a,t,g, or c
<400> 1713
gtttccattt ccttgagaga tttttgttca tccctttatt ttgagtctat gtgtgtcttt
                                                                       60
gcttgtraga taggtctctt aaagacagca taaaaataga tcttggttct ttatccatct
                                                                      120
tgccactctg ttttttgacc agggcattta gctcatttac atttaaggtt agcattgtta
                                                                      180
tatgtgaatt tratcctgtc atcataatgc tagctggtta ttttgcagac ttgtttatgt
                                                                      240
ggttgcctca tagtgtaact tgtctgtgta cttcagtgtg tttttgttgt ggctggtaat
                                                                      300
                                                                      360
agttttttct ttccatattt agcacttcct tcaaaggctc ttgcaaagta ggcctggttg
                                                                      420
tgatgaattt cctcatcatt tgcttgtctg aaaagggtct tatttctcat tcgcttttga
agtttagttt gsccagatat gaaattaagg gttggaaatt catttcttta ataatgtcaa
                                                                      480
atattggccc ccagtttctt ctggcctgta gggtttctgc tgagaggtcc actgttagtc
                                                                      540
tgatggaatt ccctttgtag atgacctgac ctttctctct ggttgccctt aacatttttt
                                                                      600
                                                                      660
ctttcatttt gaccttggat aatctgatta ttacgtgttt tggggttgat cttcttgttt
                                                                      720
agtatattac tggtgttctc tgcagtttct gaatttgaat gttggcccac ttttctaggt
                                                                      780
tgaggaagtt ttcctggatg atagcctgaa gtatgttttc taacttggtt ccattctccc
                                                                      840
catctctttc aggtacccca atcagtcata ggttcaatct ctttacataa tcccatattt
                                                                      900
ctcagaggtt ttgctcattc ctttttattt gnttttctct atttttgtat gcctgtctca
                                                                      960
tttcaaatag ttttcaagct ctgagagtct tttccctgct tgttctattc tgctactgat
acttgtgatt gcattgtgaa gttctcgtgt tatgtttttc agcttcttct ggttagttat
                                                                     1020
                                                                     1080
gttcctctcc aaactggaaa atgctatggt tctggcaggc ttgtaaaggt gctgtgctga
                                                                     1140
tggtcttaga caagatctgg aataattatt tggattatca gacagagatt ctcattcttt
                                                                     1200
ttctgttact ttctctcaaa caaatggagt ctctctctct ctgtgttctt agctgcctgg
                                                                     1260
agttggcagt ggagtgacac aagcacccct atggctactg ccactagggc ggcactacat
                                                                     1320
cagatetgaa gacagcacag tgetgggtet cacceatgge etgetgeaac cacteetgge
                                                                     1341
tactgcctat atttgctcga g
<210> 1714
<211> 372
<212> DNA
<213> Homo sapiens
<400> 1714
ggcacaggaa aggaagaaga tgactgtccc ctaaatcaaa gcccaccaca gaggacctga
                                                                       60
gcaggtccca ctgttgcaga ctgcctgctc tcaccagcta ctgggcatcg tctgactcag
                                                                      120
                                                                      180
cttgggaggg cccaagtgaa tggtcatcag attgagcaac tgggcaccaa catgtgtttc
ctgagggcct gctggtggcc agctctgtgc ttgaccatac agcaggaggg actggaaaag
                                                                      240
gggacaatac agtgcctgtg cttggggagc tctgggaaca aaagcccacc cattaaatag
                                                                      300
tataataccc ccaggtgttt ctggcagggg agatgggaaa agtagccatt ttgaaaaaca
                                                                      360
                                                                      372
gccagctggg gg
<210> 1715
<211> 745
<212> DNA
<213> Homo sapiens
<400> 1715
                                                                       60
ggcacgagga cacaaaaagc attaaagtat taagtaatgg caactggaac tttaacaacc
                                                                      120
cttctgtcct tctgtagtct gttgatatag attggatgtg tgtcctctgc agatctcatg
                                                                      180
ttggaatgtg atccccattg ttggagctgg ggcctaatgg gaagtattgg ttcattgggg
                                                                      240
cacatcccac ataaatcgct tagtgacatc cccttggtga taagtgagtt ccttctttga
                                                                      300
gttcatgcgg ggtctggttg tctaaaagag tatggcacct ctccccagct ctctcttgct
                                                                      360
ccttctcacc atatatcatg gtagttccca tttgccttcc accatgattg taagtttcct
                                                                      420
aaggcctcac caggaacagg tgccagcacc atgcttcctg catagttgtt cactcttatt
                                                                      480
cttcagaatg gctactgcaa atattgtcca gatgtcaaag ctccctactc cactctgtgc
```

| tcaccgtgga cctttccttt ttttccacta | ctcaacttgt tgtctctctc cattaggaac gtcattggta aaaaaaaaaa | ctcccagtgc tttagatcat tcgacatttt | agttaccctc tcatttaaac | ctgtgatttg tctcctctgt | gtttccattt gtccttaagt | 540 600 660 720 745 |
|--|---|--|--|---|--|---|
| <210> 1716 <211> 1203 <212> DNA <213> Homo | | adda | | | | |
| agcctcggca agactgctgt aggatataat gggagtgacc ctgacccctt gcgctgcacc cctcggttgg ctggagctgt acttgtgctg taaaagtact tacttaatct aagctataagt aaagcataaa atcaaaccct ataaattt ctttagatat tttttttta cgcaatctca ctccgagta ccg <210> 1717 <211> 722 <212> DNA | agtgggctcc atggctggcg gctagtaatg ctcctggtgt cgattttcca gcacttccca cactgtcctg aaatgtagaa tcctgtttgg atgactctgc attcaaacag agtatgaaaa cacatcacaa catgagccct aaaaaaattt tcaccatgaa tagggccact ttttttgag gctcaccaca gctgaggcta | cccctcccc agcaaggctc gccgtttgct ggtgctgtca ggtgagacaa cacgcactgt atcaccggtc ccatcttggc gatgtgtatt cattgtcctc ctycttgagc tagggctata taaatatcta gattaatccc aaagatcatc ctacttaggg acagagtttc atctctgact | agcctcactg cgtgggtgta aagaccgttg cccctttctt tgcctcgccc ccaacactcc ttctgtgtcg tccacccca ccaaacatat actctcaagt tataaaaaag taaattaaca aataactggg aagaaatctt ctacaatatc aagatatat actcttttca tctcaggttca | ctgccttgca ggaccctcca gaaaagctca tgactaggaa tgcttcggct ccagtgaaat ctcacgctgg tttgtgtgct gtatggaata ttgtcatctg tatgaccttt accatatttc gtcttttaat cttctgattg tattttgtgag ttcttttct cccaggctgg agtgattct | gtttgatctc agccatgtgc gtattagggt aaggaattcc catgctcggt gaacccggta gagctgtaga atttatggta gttccatttt aattaaactt tttgttataa agaagcactt aattcactgt agtaaatcaa aagtttagtg tttttttcc agtgcagtgg atgcgccagc | 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 1080 1140 1200 |
| <213> Homo <220> <221> SITE <222> (598 <223> n eq | - | or c | | | | |
| <400> 1717 gaatttctgg taaattgcac gtaactgggtg atctgaggtg gacttatttt attcaaaaat aaaacagaga cattgagcag ctctgggtca atgagactct | agtttcagga atttggggct catgggcttg gcccctgccc tcactgtgat gggtagattt ccactgagtc gcctgagctg ctcggtggta cctccgggtc ggctcaggaa agtctgcagg | gctttatcct tggcaagtgg ggttcgagga tgggcacctg cttttcgaac gttaaacaaa tgagtccagg gggtgacctc ggggtgagct gcttggtgta gccagggtaa | cagatgggag ggccacgtgg gggtgggaag catttgaatg acctaaaaaa ttggccctc actgacagct ggggtggcct ggggttcagt atttcagcct | ttctggctgt ctcctgacac ggaggtgcag tattatacct aatatgagca ccggtgtaac aggagaggaa cactgaccgc gggaatgggt taaaggagaa | agccttaagg ggaacaggga tgtgtgtttt ggagtgacag cttgatgcaa tgagactctc taggagagga ttggggcntc | 60 120 180 240 300 360 420 480 540 600 660 720 722 |

| <212> DNA | | | | | | |
|-------------------------|------------|-----------------------------|-----------------------------|------------------------------|--------------------------|------------|
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1718 | | | | | | 60 |
| ggcacgagtt | tgagccacat | gaaagtaaag | ctgccttttg | tgtctgtgtc | actctgtgtg | 120 |
| tgtgactgtg | taaggggtag | cacacttaca | tggaacaggt | tactgcgtgt | gggagaaggc | 180 |
| tcaggaaggt | attcatattt | atacagacgg | aaagctgggt | ggggttgcgg | acacactece | 240 |
| atagagaagg | tggtgtgagc | ttgtctggca | ggccgtgaat | aactttcata | tggctcaaaa | 252 |
| aaaaaaaaa | aa | | | | | 232 |
| | | | | | | |
| <210> 1719 | | | | | | |
| <211> 1195 | | | | | | |
| <212> DNA <213> Homo | anniona | | | | | |
| <213> HOMO | sapiens | | | | | |
| <400> 1719 | | | | | | |
| adcacdadca | accactcaca | ggtgccaggg | ctctgacatc | tcgccaggca | tagctaaagg | 60 |
| ttatactcat | ctatcccctt | ctgcttctgt | tacttttggt | gtgtggaaca | agacccatgg | 120 |
| gagetggtge | ctttggctac | ttggccttgc | cttgtctggt | ttgcttgaca | tatctgttac | 180 |
| ctaccttatc | tagaaaccat | tctcagatgg | gatgataaat | taagagaact | tacactcaca | 240 |
| gaaactccaa | aacaattcca | actgggcttt | tcttcatgtt | gaatcataat | atactgtaat | 300 |
| gatttactaa | tgaaatacca | ttttgtttat | caaattaaat | gagcaaattt | aaaatactga | 360 |
| tagccaagtg | tggtggctca | tgcctgtaat | ccccagcact | ttgtgaaggt | gaggcaggag | 420 |
| gatcacttga | gcccaggagt | tcgagaccag | cctgggtgac | atagtgagac | accatctcta | 480 |
| caaaaaacat | aaaattagcc | aggtgtggta | gcatgcaact | acagtcccag | ctactcagga | 540 |
| gactgaggta | ggaggaccac | ttaagcctgg | gagatggagg | ctgcagtgag | gtgtgatcat | 600 |
| gccactgcac | tccagcccag | tgaaagagca | agaccctgtc | tcacaaaaat | aaaataaaat | 660 |
| aattgatatt | accctttata | catggttgtt | gaaatagggt | ggtgcccttt | tggaaaatca | 720 |
| cttgacagta | tatccagaaa | tgctgatatg | ttttcacaca | aaaactttgt | tttactttca | 780 |
| gaaatttatc | ctaaatcttg | gccagacgca | gtggctcatg | tctgtaatcc | cagaactttg | 840 900 |
| ggaggctgag | gcaggcgaat | ctcttgaagc | caggagttcc | agacaaattt | ageceatgig | 960 |
| gcaaaaacct | gtctctacta | caaatacaaa | aattagccgg | gcatggtggt | acatgeetgt | 1020 |
| aatctcagcc | actcgggagg | ctgaggcatg | agaategett | gaacctggga | ggcagaggct | 1020 |
| tcagtgagcc | aagatcacac | cactgtactt | cagactgggt | gacagagtga | tagateacac | 1140 |
| caaaaaaaaa | aaatcttaaa | tetagaaaae | tgrayargry | ccaggcatgg | aggaccacge | 1195 |
| ctgtaatccc | agcactttgg | gaagergagg | tgagtggatt | atttgaggtc | aggag | 1175 |
| <210> 1720 | | | | | | |
| <211> 1720 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | - | | | | | |
| <400> 1720 | | | | | | C 0 |
| ggcacgagaa | attttcagga | tgccagcttc | ttagaaagca | ggctctttcc | cagtgggttt | 60 120 |
| cttacaatga | aaacaaccaa | aatataacat | agageteatt | aaccttgcca | gccactgtgc | 180 |
| taaattattt | gtatttattt | tattaataat | aattatttct | ttcatcttaa | aaataacctt | 240 |
| taacttatta | agaatgcatg | cttattggat | attetttaga | aaatatagti | caacaaattc | 300 |
| agccataatt | tcacccccag | agagtgtcat | teccaaeget | . ciggillayy | atggctttgg | 360 |
| aagctggagc | cctatacatt | gggtggatat | taggecagge | taattaaaa | tttttttt | 420 |
| cagaagtttc | ccttccaaaa | tgtgggaagg | cctagtagtt | tattacataa | gaatcttttc | 480 |
| tgttttcttc | teteteaage | : gcttgagtat | . aayacctagt | . latigiciya . atacaactat | tttgaaaaac gggaaagaaa | 540 |
| tgtatttgat | tadadagccc | . ccaaaacyty | , gudayuuday , aattaaaaa | tcaacacac | gtgaatgccc | 600 |
| aacgacacc | attaaacaac | . yayaaycaty . taaaaaaat | : aattqaaaaq | aaggatcccc | aaacacaatt | 660 |
| tagatasat | taatattte | . igaaaagacc | . tcaaccctca | ctgagcacag | gttacatgcc | 720 |
| aggaaggagg | addacactac | . accaacgaag | atggcatcha | cctatatata | tgtgtgttgg | 780 |
| raacacatat | gagttcatgt | : acaacaatat | gtgatgtgtg | tatctaaqta | tgtgtgccag | 840 |
| tataacttat | gtgtgcgaat | gtgtgttcat | gtggttgaat | gtatgtgtgt | gtgcaagtgt | 900 |
| gtgaggtgat | tgtatgagtg | tgttttcacc | catgtgggtg | tgtgactgtg | agtgggtatg | 960 |
| tatatatata | tgtgtaggag | gagaggagga | gatgcaaagg | , gaaatagaca | ctgctatggg | 1020 |
| agcccagggg | gcttgccagg | gagagtgcac | gagacctgca | catagcacco | tcttcctttg | 1080 |

```
atttgcaaag ccctctggac ctcccttcct gcctcttttc ctcctctatt gctctaaatt
                                                                   1140
                                                                   1200
ctgaaaccag aattgcttgg ggttcctcat acaacctctt gacaatccca cccttccaaa
                                                                   1260
ggaggataaa ctgactttca aagccagtat ccccaatctc aagtcctggt ctctcaactg
                                                                   1320
gacttggggc aaaatggtta cagagcatgg taggcagcct tcaagatggc tgtctctgaa
                                                                    1347
attcaggctc ttgtgggatt ccttccc
<210> 1721
<211> 794
<212> DNA
<213> Homo sapiens
<400> 1721
ggcacgagaa aagtttcagt tctggggatg attttgttcc tattcttgat accaagcgat
                                                                     60
aaaatcaggc tgctaagaga aaatgaaaag gaaatagcca gctagtgtca ttgaatcata
                                                                     120
tcccgaggca gtgagtttct tccagcacat tttggcctca gtcctgaggc tggaccttaa
                                                                     180
                                                                     240
ctagtgaact gcaaactcac tcaattatgc agtctgcttg gtgcgatgga agtgaaaatg
                                                                     300
tcctagagag ttgggtgcta gtatgcattt tgatagtctc ctagcctgtg acccaggaca
                                                                     360
gattccttgc atgcatagga gtttgtcacc atgcaaaatc tggctgttgt tcttctgaga
                                                                     420
acatggggga gctggactgt caacaatgag ccatatcagg ctgaaactgg gaaactgttc
                                                                     480
tgctccttca gagtcaagac aagccagaat gagtgtcaaa tttccttcct ctgtgcttcc
                                                                     540
tcagatgtgg tcagattcat agccttcagt ctattctaat tggtagctag cctggtgtgg
                                                                     600
acttttgacc acccaccaat caaccaactc ccaccctcac catttactgc acgagtaaag
                                                                     660
ccacgettee taggaactae cattggtaga gatgttaetg agteatagge cetgagatag
                                                                     720
gaatgatcta taaaggccat ccacgccagt tettgaacce ttetacaaca gtecagaete
                                                                     780
794
aaaaaaaaa aaaa
<210> 1722
<211> 1184
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (467)
<223> n equals a,t,g, or c
<400> 1722
ggcacgagca gaggctgatt ctctgtaatc ctaccctccc cttctcccca tcagggccct
                                                                      60
tcttagcact ctgggtggtt gctccaacca tgcacctgga agcttgggct tgggttacaa
                                                                     120
tgctctgttt atgtgtttgt ctcccctgat tgcctgccag tgattcttcc ttctcatatc
                                                                     180
                                                                     240
tcagcactta acatagttct tgawatatat taggtgataa aaattgtctc ttcttttagc
                                                                     300
actggagcca tgagataccc ctgagaagtg gtgagcttgt ggcgtgaaga gctgggtgac
                                                                     360
ctcctcttcc ttttggtggc ctgagccaga gatgtcactt cctcacctgc tcttttctgc
tttcatgtct caagctgcct gggggcttct ttttttaggt ctcttacact cgactaatct
                                                                     420
gcgatgggcc tagaacccac aatggggaaa ggacagactc ttcaatncgc aggttgggaa
                                                                     480
                                                                     540
acaaaatatt cacctgcaga agaattaaat tggagccttg tctcacatct tatataaaaa
tcaactgaaa atggattaag gactttaaca taagatgtga aactagaaga aaacataggg
                                                                     600
gaaaagcttc ttgacattgg tctgggcaat gattttttt ttttttaata tatgatccca
                                                                     660
                                                                     720
aagctcaaga aaaaaaata ggtgaatggg gccaggcacg gtggctcatg cctgtaatcc
                                                                     780
cagcactttg ggagaccaag gcgggcagat cacttgaggt caggagttca agaccagcct
                                                                     840
ggccaacatg gtgaaacctc gtctctacta aaaatacaaa aactagccag gcatggtggt
                                                                     900
gggcacctgc aatcccagct ccttgggagc ctgaggcaga agaatcactt gaacctggga
                                                                     960
ggcagaggtg gcagtgagcc aagatcgtac cactgcactc ctgcctgggc aacagagtga
gcttcgtctc aaataaataa ataaataaat aaataaaaca aaatacaaa aattagccag
                                                                    1020
                                                                    1080
gcatggtagt gcatgactgt aatcccagct attcggtagg ctgaggtggg aggatcaact
                                                                    1140
gagcccagga ggcagaggtt gcagtgagcc aagatcaagc tattgtattc cagcctgggt
                                                                    1184
gacagagtga gacactgtct caaaaaaaaa aaaaaaaact cgag
```

<210> 1723 <211> 450

```
<212> DNA
<213> Homo sapiens
<400> 1723
ggcacgagac acaactggga tccaagtgta tgcccttgga cacgttgctt aacctctctg
                                                                      60
tgcatcagtt gggtgataat atctactcct ggcacatttt cagcgttggc tgagttacat
                                                                     120
gtacagtgct taggccacct gggggagagt aagagtggga tacgtgagga tgtggagtct
                                                                     180
240
ctgctcccta gggcgtagat ttgaggaata ttcctggttc ttcccaggca gcaggggctc
                                                                     300
aggctgtgct ggagtcagct aggctaaggg gctggtctgg catccgcgtt gtcctgtcac
                                                                     360
ctccttggtg ttttctccag gcctggatct gtgctgtgtg ggcacctgta ttcctccctc
                                                                     420
ctgccctcac tgattctcca tacctttctt
                                                                     450
<210> 1724
<211> 1375
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (825)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1346)
<223> n equals a,t,g, or c
<400> 1724
gaattcggca cgagcaacca ttagacattg aagtgatgaa tcgttatccg tgctgcactt
                                                                      60
agaccgaggc tatccagtag tttatttatg gtggcagtgt atctcaccaa aacactatgc
                                                                    120
tttccagctt ccctttcagc gacccatgtt ctttcattgc ttctggtcag tgaaatctaa
                                                                    180
gcaagtattt tttgggtgag tcttccagga aagtgtttag gggtgtggtt aatttttgtt
                                                                    240
ctgccaggaa aatgagtggg atagctggaa tcatgatagt catggcatct ctgttaatgt
                                                                    300
ttttggtgcc tttgaacaga ataggaagaa tcccccatct ttgcagatga gttagaaaat
                                                                    360
ttcctcctct gggtagaagg aatccctcag aatacacagc ccccactcac ttcttggtca
                                                                     420
ggtgtcttca cagtaaataa actacacaac tgtatggggt ggcctggaca gccatattgg
                                                                     480
actatgaagc aggaaaggaa gccatgctct aaagatagca aacccaagga gaaaagcagc
                                                                    540
ctggtccttg ctgaccatgg atgtgccata tcagccctgc attgactact tccagacttc
                                                                     600
ctttatgtga gagaaaaata acatttattt tgttactgtt atttctgatt tattttacta
                                                                    660
gcagctaatt gcttgtwaag ttaagactac atgatatgat ttgagaattg ctatcattaa
                                                                    720
ttaattaagc aattgttcct tgtgaattct gtatcagaaa ttctatgatg tactagagat
                                                                    780
aaagacagaa tttgcaatct aggatgtgaa agacagatgt gtacncatac aggtaattat
                                                                    840
agcataatgt catatgcttg ttcagtttgc atgctggata gagacatcta ggcaaaaggt
                                                                    900
tagtggggac tgtgctttga tagactgcat gcmcccagar ggaaacatat cctaattcat
                                                                    960
ctccacaaac ggggtacctc tttttaaaaa tgcttcaacc aataataatg ctttattatc
                                                                   1020
atttagttca gtgattacca aacttatttt agcagccatt agccttcttt gaaagaataa
                                                                   1080
taatacagaa acacaactta ttagttcaga tgttttggag agatctaact cagattagat
                                                                   1140
ctaaaagaga atttgctggt taatttaacc acacttactg taagagagtt gggcacagcc
                                                                   1200
tgttaaggga gtacatagca gggtttttag aaaaagcttc acagaggaag tgatgcttga
                                                                   1260
ggtgaatctt gaaggatgat tttaagaaaa ggacaaaatg ggaaacagca tactatgctq
                                                                   1320
aggaaagcgg cacgagcggm acgacngggg gcccgtaccc aatagccctt tggtg
                                                                   1375
<210> 1725
<211> 328
<212> DNA
<213> Homo sapiens
<400> 1725
ggcacgagta attttctcac ttttgataga ggcatgggta cagagaagta ttttttttta
                                                                     60
gtttaagtaa acaacagaac aagcattcat atgagacaac tgacacaaac ctgagggaga
                                                                    120
```

```
180
cactagggag tggaggggac tgtggtgcac tagagaccgt gtatcccttc ttaaggggaa
ccgtcccttc tcagctcagc tgactgttgc cttggaggaa ggcggagctg gtatttctgg
                                                                      240
atcttcctat ttttcaaagg aagttaaaca tctggtgttt tatgtgaaat ctttccattt
                                                                      300
tctaatatta cctgtttggt cgctgtgc
                                                                      328
<210> 1726
<211> 649
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (567)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (588)
<223> n equals a,t,g, or c
<400> 1726
ggcacgaget gececeaaca ecagtetgat gggattgtee tgaggttgga etcegttatt
                                                                       60
ggaattctaa gccccttggg tggttttwat gtgtagccag ggtcaagaac cctgcctgat
                                                                      120
agagtcattt ggggcacacc tcagcacagg gcccagtaca taggaagccc ggggatgtta
                                                                      180
                                                                      240
gctggtgtga tggtggctgc tggtgtcggc tgatgtacag ctttgtgtga gaggacagct
tggggccgga atcctccccc atggctcctc tttgccaggg accctgtgcg agccccatgc
                                                                      300
tgacgtccct acccgaattc tcctggaagt tcctcctgta gcctcctggg tccccaggtg
                                                                      360
                                                                      420
gctccctctg acctcactga tgatgcaggt gcccaggtgt gccgtttctg acgcagggca
                                                                      480
gggccagggc ttatgcagtc gggtaatggg ctggaggcgg gccttagggt ggaagtcagt
gtttctgtcc cctgytgcag caagagcagg ataggacatc aggcccccc cccccaatt
                                                                      540
                                                                      600
ccccagggaa agaaaaccca accaatncca aacccagctc ccactttntc aaccacagtt
gcagagggcc ctgctgcctt ctgtgaaatg atggggctgg acggctcag
                                                                      649
<210> 1727
<211> 1521
<212> DNA
<213> Homo sapiens
<400> 1727
ggcacgagct ccacttgaat ttgcttaggg acctcttcct ccatttgact aaactcccag
                                                                       60
tgccgtgcaa tggggtcact tcttgtcttt ccacggtcat cctatgcact ccttcacctc
                                                                      120
atcggagtet gatteettat eteatgetea geettgtgge gggeaegtga caageateae
                                                                      180
                                                                      240
ctcctgaatt tctcatggca ccggcgcaag gtacaggctc ttgacaaccc tgtgttatgt
                                                                      300
gtcaggaaac tgaaattgaa atgaattatc catggctaaa tgcattatcc atggctacca
gcagggaaat ggaaaatatt tgaaccccag aactgttgat cgagaattct ttcaagtttt
                                                                      360
atatttggcc tcttctcctt aatttagata ttcagtccta tttccctgat gcctacaatg
                                                                      420
tgccaaagtc gcttatactt ctttgccttt cgagttgctg ttttcttgtc tcaaaacatc
                                                                      480
ctactcttga gttctttgtg cggttaatat tttgtcatcc tttagttctc agctgaagtg
                                                                      540
tcatattctc aggtaggaat tttctaccca cttttccata agcagaatat ccttagtttc
                                                                      600
tgtctgcttt cacagagtgc ttactgccta tttttaaatt tactacactc tataattatg
                                                                      660
ttactgatct ggttactgtc acctgatata attatttaat gtgcctggct tagtgtatgt
                                                                      720
agttgtgcag taaatattca ttgaatgaat aaacgttaaa ggttatgaaa ctgtgacgta
                                                                      780
aaaatcttat gaataaaaaa tggaagatgg gaaaagtcag aaacagcttc attacatgtg
                                                                      840
taaaacacaa accaattatg tccaaagaaa agcaaatatt atttccacag aattaataat
                                                                      900
ttaatattat gtgaagtctg ggtcattgaa tacttgtaaa ttggcaattg attctcgata
                                                                      960
tattccttta aagttataat cttcttgaag tttaagggaa gaaaggtgct atgagagggc
                                                                     1020
acaatggatg ttgaataata aatttttaaa aacactttat tcttagaagt ttcactttgg
                                                                     1080
tttatcttcc ttagttaaat ttcctttgta gcaaatgtgt gtacccttga tcacactgaa
                                                                     1140
                                                                     1200
gaaaatttgg atgttgacag cacatggaag cattgttttc agatatcttc aacttagcaa
                                                                     1260
cttttggatg tcaggctcca aaaacatcac aggagggaaa ataccctgac tttattgttt
gatgaaaatt tgtggattgt gcaattattt tgggtttgta tgatttgctt ttatttactt
                                                                     1320
```

| · | | | | | | |
|---|--|--|--|--|--|--|
| tgggttttgc aaccaagtat | atacagtata tttacttata ttggaaactg aaaaaaaaaa | gcgttttcct agaaatgtga | caagcaattc | ttcagatact | gagcatcaga | 1380 1440 1500 1521 |
| <210> 1728 <211> 653 <212> DNA <213> Homo | sapiens | | | | | |
| gaggaaattt ctggtaatta ggaacagttc atttaagtca aaaaaatgta ggtgtggtgg aggtcaggag acagaaattt gcaggagaat | ttatgccttt tacagtctat tttgttgact agtattaagg ttgtcttctg agcagctttc ctcacgcctg atcgagacca gttgaatgtg tgcttgaatc tgggcgacag | agtgttacat actccatgtc attagtaata aagatggagt catcaaaaga taatcccagc tcctggacaa gtggtgtgtg caggaggtgg | aagtactggg tagtcaaatg ggaaaaagac actttaaaag cattatggtt acattgggag catggtgaaa cctgtggtct aggctgcagt | gccttgcata gcactttaat ttaacatttt ctccaaggag aaggtttgta actgagtcgg ccccgtctct cagctactca gagccaagat | aagtagatat tttatgtttt aattctgtga ttatctggaa ctgtaggcct gtggatcacg actaaaaata ggaggctgag ggcgctactg | 60 120 180 240 300 360 420 480 540 600 653 |
| <210> 1729 <211> 687 <212> DNA <213> Homo | sapiens | | | | | |
| <220> <221> SITE <222> (664) <223> n equ |) uals a,t,g, | or c | | | · | |
| taaaacagtg aatattttct gtcaatcact cagtcctcac tcggagcagc catttatgta tgctatgtcg agcttgcaga ttttgaaaag ataagctttt | ccgaggcctg tagaagtaca tgagtctcat ggcatgtcaa tgctcctgtc cttggagcca gaaactgggc aatatcacca aagtttgatg ggggaacttt gacacatgtg gaaaaacaaa | tttgaatgaa gtctttggct tcacgcaggc tttgctctcc gggaaaagga gcctgacttg atgatcagaa tatgtgtgtg gtaaggtaag | acattatggg cgtgacctgc ctctggccat tgctgccagc accgtagggt gctctttcc ataacagggc actatgctat taactttcca | aataacaccg ggcatcagct ggtaacagca tgtggccga gaagagaggc caagctgtcc agacttcgac ggatataaag aataagtgat | aaaaaataca ggccaaagag gtctgtcagc agcccgtctg tgtggggtgc acctaaaaaa tctaaactaa cctgttatca taaaatgttg | 60 120 180 240 300 360 420 480 540 600 660 |
| <210> 1730 <211> 548 <212> DNA <213> Homo | sapiens | | | | | |
| cgggccatcc ggcacagaga cgcccaggcc cccgggatcc ggagcctgag gccgagtctg | gcacgagggc tectgetecg caggceteac tgggceegga tgtceetggt gctaagaage accetetgte ecctggagag | gttctccctg caaagacgag ggagcagccc gagctcatgg ttggttcttg cgtgggtgca | gggacgctcc gccagctggc tcctcccacg actccacaag ttctcatcca ccggctgagt | acgcctcacc tggtcagcat ctgtgggccc tgacactcca gggcttgagc gcagctgtgg | gcagttgtag gggaggaggg tcgctgtgga tttcccagat ccagtgctga ccccaggctc | 60 120 180 240 300 360 420 480 |

| ctggagatct cttgttgtca gcagttgc | cagccacttg | ggccttggac | gacccacaaa | tgagagctaa | 540 548 |
|---|---|--|--|---|--|
| <210> 1731 <211> 872 <212> DNA | | | | | |
| <213> Homo sapiens | | | | | |
| <220> <221> SITE | | | | | |
| <222> (694) <223> n equals a,t,g, | or c | | | | |
| <400> 1731 | | | | | 50 |
| ggcacgaggg gaaaaggtga agagaccact taagaaaaat | | | | | 60 120 |
| gaaggaaagg ctgttagctg | | | | | 180 |
| ttgacattta atccttggaa | | | | | 240 |
| atttgttttg cctcaataag | | | | | 300 |
| aacagctccg gtctgcagct | | | | | 360 |
| gggtacccgg ctcatctcac | tggaactggt | tggacagtga | gtgcagccca | tgaagggtga | 420 |
| gctgaagcaa ggtggggtgt | | | | | 480 |
| tcctagccaa gggaagccac | | | | | 540 |
| tactacgctt ttcccaccat | | | | | 600 660 |
| caccaccagg gccctgggat | | | | | 720 |
| ctagctgcag gagtgtttct cattcactcc cctggaaagg | | | | | 780 |
| cccacccca cggagcccag | | | | | 840 |
| cagcagtctg aggtcaacct | | | 9 3 | 5 5 5 | 872 |
| | | | | | |
| <210> 1732 | | | | | |
| <211> 1782 | | | | | |
| <212> DNA <213> Homo sapiens | | | | | |
| (213) Homo Sapiens | | | | | |
| <400> 1732 | | | | | |
| ggcacgagcg gcacgagcac | | | | | 60 |
| atcatcatga atcgtcgagt | | | | | 120 180 |
| cttcactcat tggttcaatt attgacaact tcctgtgtga | | | | | 240 |
| gtcactgggc tttctatgat | | | | | 300 |
| ctcctgcttt cctatggggt | | | | | 360 |
| tgcaaagctt tctacacctg | | | | | 420 |
| tgcatcttcc tgtttgcaag | | | | | 480 |
| gttttaactt gtataactco | | ccactaatct | atgccctgag | gaatgcagaa | 540 |
| atgaaaagtg ccatgaggaa | | | | | |
| tatccctcat gagaatatga | | gaaaaagtaa | gcttagctgg | | 600 |
| | ctttcattct | gaaaaagtaa ttcacagaag | gcttagctgg caaggaataa | tttcactatc | 660 |
| ctatcagatt acatttctgt | ctttcattct tatcattcgc | gaaaaagtaa ttcacagaag ctttagttat | gcttagctgg caaggaataa ttagcttact | tttcactatc tattctgaag | 660 720 |
| caattatata cattaatatt | ctttcattct tatcattcgc tatgtaagta | gaaaaagtaa ttcacagaag ctttagttat caatatgtta | gcttagctgg caaggaataa ttagcttact agcccattac | tttcactatc tattctgaag agaccaagat | 660 720 780 |
| caattatata cattaatatt aattgcatag gtttaacagt | ctttcattct tatcattcgc tatgtaagta gtatagtgtt | gaaaaagtaa ttcacagaag ctttagttat caatatgtta tttttaatca | gcttagctgg caaggaataa ttagcttact agcccattac tactgtgtta | tttcactatc tattctgaag agaccaagat agattcttta | 660 720 780 840 |
| caattatata cattaatatt aattgcatag gtttaacagt gtagtaacga tatttagttt | ctttcattct tatcattcgc tatgtaagta gtatagtgtt tatttcaagc | gaaaaagtaa ttcacagaag ctttagttat caatatgtta tttttaatca tgtttttaat | gcttagctgg caaggaataa ttagcttact agcccattac tactgtgtta tttaaaaaatc | tttcactatc tattctgaag agaccaagat agattcttta atttatttt | 660 720 780 840 900 |
| caattatata cattaatatt aattgcatag gtttaacagt gtagtaacga tatttagttt cttttgtatt tagtttaaat | ctttcattct tatcattcgc tatgtaagta gtatagtgtt tatttcaagc tgacaataat | gaaaaagtaa ttcacagaag ctttagttat caatatgtta tttttaatca tgtttttaat ttagtatatt | gcttagctgg caaggaataa ttagcttact agcccattac tactgtgtta tttaaaaatc tatggagtac | tttcactatc tattctgaag agaccaagat agattcttta atttatttt aatgtgatgt | 660 720 780 840 |
| caattatata cattaatatt aattgcatag gtttaacagt gtagtaacga tatttagttt | ctttcattct tatcattcgc tatgtaagta gtatagtgtt tatttcaagc tgacaataat cgagctcaga | gaaaaagtaa ttcacagaag ctttagttat caatatgtta tttttaatca tgtttttaat ttagtatatt gccattgggt | gcttagctgg caaggaataa ttagcttact agcccattac tactgtgtta tttaaaaatc tatggagtac agcttgcaaa | tttcactatc tattctgaag agaccaagat agattcttta atttatttt aatgtgatgt ggcttgcagg | 660 720 780 840 900 960 |
| caattatata cattaatatt aattgcatag gtttaacagt gtagtaacga tatttagttt cttttgtatt tagtttaaat tcctcgtgcc gaattcggca tgccattaaa aggcagagco tccctgatcg tctcatccco | ctttcattct tatcattcgc tatgtaagta gtatagtgtt tatttcaagc tgacaataat cgagctcaga aggacgtaaa gaaccctaga | gaaaaagtaa ttcacagaag ctttagttat caatatgtta tttttaatca tgtttttaat ttagtatatt gccattgggt ctcagagtgg ctagagggag | gcttagctgg caaggaataa ttagcttact agcccattac tactgtgtta tttaaaaatc tatggagtac agcttgcaaa agaggcttat ctttataggc | tttcactatc tattctgaag agaccaagat agattcttta atttatttt aatgtgatgt ggcttgcagg ctctctccac tgatgcagaa | 660 720 780 840 900 960 1020 1080 1140 |
| caattatata cattaatatt aattgcatag gtttaacagt gtagtaacga tatttagttt cttttgtatt tagtttaaat tcctcgtgcc gaattcggca tgccattaaa aggcagagcc tccctgatcg tctcatcccc gttcccaaac ttgtcggca | ctttcattct tatcattcgc tatgtaagta gtatagtgtt tatttcaagc tgacaataat cgagctcaga aggacgtaaa gaaccctaga actgggagca | gaaaaagtaa ttcacagaag ctttagttat caatatgtta tttttaatca tgtttttaat ttagtatatt gccattgggt ctcagagtgg ctagaggag ccaagggagc | gcttagctgg caaggaataa ttagcttact agcccattac tactgtgtta tttaaaaatc tatggagtac agcttgcaaa agaggcttat ctttataggc tcccaagagc | tttcactatc tattctgaag agaccaagat agattcttta atttatttt aatgtgatgt ggcttgcagg ctctctccac tgatgcagaa actcatgcct | 660 720 780 840 900 960 1020 1080 1140 1200 |
| caattatata cattaatatta aattgcatag gtttaacagt gtagtaacga tatttagttt cttttgtatt tagtttaaatt tcctcgtgcc gaattcggca tgccattaaa aggcagagcc tccctgatcg tctcatcccc gttcccaaac ttgtcggcac gtatccaacc ctagagatgg | ctttcattct tatcattcgc tatgtaagta gtatagtgtt tatttcaagc tgacaataat cgagctcaga aggacgtaaa gaaccctaga actgggagca tgaattaatg | gaaaaagtaa ttcacagaag ctttagttat caatatgtta tttttaatca tgtttttaat ttagtatatt gccattgggt ctcagagtgg ctagagggag ccaagggagc ggtacagggt | gcttagctgg caaggaataa ttagcttact agcccattac tactgtgtta tttaaaaatc tatggagtac agcttgcaaa agaggcttat ctttataggc tcccaagagc atgaccttag | tttcactatc tattctgaag agaccaagat agattcttta atttatttt aatgtgatgt ggcttgcagg ctctctccac tgatgcagaa actcatgcct ctttggaaat | 660 720 780 840 900 960 1020 1080 1140 1200 1260 |
| caattatata cattaatatta aattgcatag gtttaacagt gtagtaacga tatttagttt cttttgtatt tagtttaaatt tcctcgtgcc gaattcggca tgccattaaa aggcagagcc tccctgatcg tctcatcccc gtatccaacc ctagagatgg tttcagattc ccaggtgatc | ctttcattct tatcattcgc tatgtaagta gtatagtgtt tatttcaagc tgacaataat cgagctcaga aggacgtaaa gaaccctaga actgggagca tgaattaatg ctaatttgag | gaaaaagtaa ttcacagaag ctttagttat caatatgtta tttttaatca tgtttttaat ttagtatatt gccattgggt ctcagagtgg ctagagggag ccaagggagc ggtacagggt acaagcttgg | gcttagctgg caaggaataa ttagcttact agcccattac tactgtgtta tttaaaaatc tatggagtac agcttgcaaa agaggcttat ctttataggc tcccaagagc atgaccttag gaaatactgg | tttcactatc tattctgaag agaccaagat agattcttta atttatttt aatgtgatgt ggcttgcagg ctctctccac tgatgcagaa actcatgcct ctttggaaat taaagtcata | 660 720 780 840 900 960 1020 1140 1200 1260 1320 |
| caattatata cattaatatta aattgcatag gtttaacagt gtagtaacga tatttagttt cttttgtatt tagtttaaatt tcctcgtgcc gaattcggca tgccattaaa aggcagagcc gttcccaaac ttgtcggcac gtatccaacc ctagagatgg tttcagattc ccaggtgatc aagaacaagt tctccgaagg | ctttcattct tatcattcgc tatgtaagta gtatagtgtt tatttcaagc tgacaataat cgagctcaga aggacgtaaa gaaccctaga actgggagca tgaattaatg ctaatttgag ccacagacct | gaaaaagtaa ttcacagaag ctttagttat caatatgtta tttttaatca tgtttttaat ttagtatatt gccattgggt ctcagagtgg ctagagggag ccaagggagc ggtacagggt acaagcttgg aagttcaaat | gcttagctgg caaggaataa ttagcttact agcccattac tactgtgtta tttaaaaatc tatggagtac agcttgcaaa agaggcttat ctttataggc tcccaagagc atgaccttag gaaatactgg cccagattct | tttcactatc tattctgaag agaccaagat agattcttta atttatttt aatgtgatgt ggcttgcagg ctctctccac tgatgcagaa actcatgcct ctttggaaat taaagtcata acacttccta | 660 720 780 840 900 960 1020 1140 1200 1320 1380 |
| caattatata cattaatatta aattgcatag gtttaacagt gtagtaacga tatttagttt cttttgtatt tagtttaaatt tcctcgtgcc gaattcggca tgccattaaa aggcagagcc tccctgatcg tctcatcccc gtatccaacc ctagagatgg tttcagattc ccaggtgatc | ctttcattct tatcattcgc tatgtaagta gtatagtgtt tatttcaagc tgacaataat cgagctcaga aggacgtaaa gaaccctaga actgggagca tgaattaatg ctaatttgag ccacagacct atgcttgatc | gaaaaagtaa ttcacagaag ctttagttat caatatgtta tttttaatca tgtttttaat ttagtatatt gccattgggt ctcagagtgg ctagagggag ccaagggagc ggtacagggt acaagcttgg aagttcaaat actctctgcc | gcttagctgg caaggaataa ttagcttact agcccattac tactgtgtta tttaaaaatc tatggagtac agcttgcaaa agaggcttat ctttataggc tcccaagagc atgaccttag gaaatactgg cccagattct ttggtttctc | tttcactatc tattctgaag agaccaagat agattcttta atttatttt aatgtgatgt ggcttgcagg ctctctccac tgatgcagaa actcatgcct ctttggaaat taaagtcata acacttccta catagcatct | 660 720 780 840 900 960 1020 1140 1200 1260 1320 |

```
cattattggt ttcttaaaac agcaataaac caactaacaa aacagggacc cctggcttct
                                                                     1560
                                                                     1620
gtgcctgggt gtccaggagg aagaacatgc tgaaaaatac caccaatata gagagaccac
caatcagaac ttgggctggg aggagttaac ggaatcttca gccatcagag ctggaaaggg
                                                                      1680
gccttagaca gcatctcttt cctcaccagg tgcaggttgt atgggtaata actccaaaga
                                                                      1740
agctaaatga cttgtccaaa gccacacagc aataatacac tg
                                                                      1782
<210> 1733
<211> 702
<212> DNA
<213> Homo sapiens
<400> 1733
ggcacagtca caccgctaaa ttatgaaaga aataattatc aacactttct aattacctaa
                                                                       60
caaagtaatt tgggattcac cgtggggctg gcgggatggg gaaccaacat ccacttacag
                                                                      120
ccagggtggt gtacgccaca ccgcgaggga ctggctgtat tggtagtagt ggcgatgggg
                                                                      180
tgggggctct tgtgcacttt tttgtaccta gcaccccaga agacagaagg agcagcggca
                                                                      240
                                                                      300
gatcttgcct ccactagccc tgccccctag gcctggtggc gcgcgctttg gccactggag
gtgaggaaga tcctgggtgg caacgagaga cgtctacaca tagataaggg agcctaccac
                                                                      360
aggcctgggt ttgctgcggg tttcggtgtc ccccagggac tcctaaactc tggaagtcgc
                                                                      420
gctagacctc aggaggccgg aaaatgacca cctggcgtcg gtggctccag cagatctgag
                                                                      480
ecectaggee eeetgggete eaegetgage egegeteteg gggegagtga geeegggget
                                                                      540
ctccgcgcat ggggagtgga gaagggaggg ggaggaggag gaaggctggg agggaaagag
                                                                      600
                                                                      660
gatgtgtgtg ttgggggagg gaaggtgcag ccgtctttcc tgggaggaga agcgcgggtt
                                                                      702
cctggctctc cacgcgcact gctttaatca gacccgtgca gc
<210> 1734
<211> 917
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (610)
<223> n equals a,t,g, or c
<400> 1734
gtctatacag agattatatt ttgtagaagg ataatccatg tctcactgcc ctctcaaatc
                                                                       60
aactcctcaa gctcttatgc aacacataca cacacacaca tttaccaggt gtgactaaag
                                                                      120
tagataggtt gatcatttac atgtaaaaat aaacatttag tcacctccca cactaacagg
                                                                      180
cccatgctga acctttgtat cactttgctc tttttatcag tgaccttgac caatatccac
                                                                      240
tcaaaccact cctcctactc caactacttg ctgtgatggg agcaacacac acacacac
                                                                      300
acacacac acatacacac gcacatacca catacccacc catacaccca cagtcccttg
                                                                      360
gcagtaaagt aactaggatg acccagaaga cccatcccc cactgagaag tgtagaagcc
                                                                      420
atgagtttca ccttttttga aacatctgct gatttacatt tgctaagata gttatgtatt
                                                                      480
agctagccac ctaacagtga aaataatgac atagaaggaa aggggagaat aaggcaactt
                                                                      540
tattcctttt ccatccagtc cttccttctt cgcctgttgg tagaatgtgt ttgtgtcaat
                                                                      600
aagtgaaatn aaaacagttg agtacaagcc aggtgcggtg ctcacgcctg ttaatcccag
                                                                      660
cactttggaa ggccgaggca ggtggatcac ttgaggtcag gtgttcgagg ccagcctggc
                                                                      720
caacatggtg aaaccctcat ctctactaaa aataccaaaa ttagctgagt gtggtgcatg
                                                                      780
cacctgtagt cccagatatt aagaggtgag gcaggagaac cgcttgaacc caggaggcag
                                                                      840
aggttaccgt gagccgagat tgtgccactg catcttgcct gggcaatgga gcaagactcc
                                                                      900
atctcaaaaa aaaaaaa
                                                                      917
<210> 1735
<211> 1260
<212> DNA
<213> Homo sapiens
<400> 1735
ggcacgaggg agggcattct cagcacctct gtgaaatgcc cctgaaaatg catccagaag
                                                                       60
atgcatcccc tactgtttta tttggtgaag ttattccttg aggccagaga taccacctgc
                                                                      120
```

```
attattatgt cctgcccgac gcctggcatc caggaggctc tcaaaatcac ttgcagttga
                                                                       180
cataggtgaa tatcagcatg tgcgccttgt gttaaatgcg ctggacacaa gaaccagaca
                                                                       240
gagcagttct atcttaaggg atattcaaga ggtgcctctt acctgtgggg tcagaggaca
                                                                       300
ggtcttagga ttgtgaggtc aacccttgtc taaggtttca ctgggaaatt agggtcgggt
                                                                       360
ggacttetee tgggeeetea gteeteaggg teaateteat gageateage tettetgeet
                                                                       420
cctcctctt gaaagtgaga gatgagatgg taggggaggc atccatgagc acttggagga
                                                                       480
gaaacaggta ctggggctcc tgctcacagc atcataggaa ttcctctgta tggcccaggt
                                                                       540
gcttgggatg tcaattctga cctaagagag tgttccaaac ctttgtgtct caaatgtggt
                                                                       600
ccaaggaccc atagcatctg catcacgtgg gagctcacta gaaattcaga atctcaggtc
                                                                       660
tcatgccaaa cccagtgaat cagagtctgt atcttaagat ccccagggga tttgagtgca
                                                                       720
ccctaaagtt gagaagcact gctcgaaatt gggtcctagt agatatttct cctccatcct
                                                                      780
accetecata tgtggtettg cettatgeee teaagggeee tggeacetgt tgeeeteega
                                                                       840
caagcctggg gggccgcctt gaaggtacat atctcattga gacaggagtg tgcctcacag
                                                                      900
aggeteeeta gtagteetea acceetteea tgeeteteet gttagggate egetgtggge
                                                                      960
tgggcactgt gcaggccctt gcagtgagat gactcagctc caggtcctgc ctgcagggcc
                                                                     1020
caaccccggc ttggggtcta ctggaagaga caggccacct acctccctga ccactgggtg
                                                                     1080
atataaaatg tgattagaca agaaccaaga ggccagaagt tctgggaggc acaatgcctt
                                                                     1140
ttagctggag cagtcaggag agcgtcacag gaggtagcat ctgtgccagg ccctgaagcc
                                                                     1200
caggtaagac tggttacatg tatgtgggga aggacaaggc aaagcggcag gaaattacat
                                                                     1260
<210> 1736
<211> 859
<212> DNA
<213> Homo sapiens
<400> 1736
gattgattag tttaactggc caatacttgt tgagtggctt acaagactat agtagttaaa
                                                                       60
agcatgagtt ttgttttatc acttaaatcc tggcaaggac ttattaacca ttcgactctg
                                                                      120
ggcagggtta cttaatatct ctgcctcaca acattttccg tatctctaaa atggggttgt
                                                                      180
tcaacaagaa atatactcaa gtttaacatg gcaacaatgt tcaccaaaat cactaccagt
                                                                      240
atcgtctttg gtctgtctct ggcattgcct atttcaacac gggcatgatc aatgtgcatg
                                                                      300
atcaatgaca atgtgatagc aagggtctcc atcatatcaa gacattgtta caatgtcagt
                                                                      360
aatacaaagc agtttggaat ttattgttaa taacataata ttcacttcca aaaacaggta
                                                                      420
agcaatttag atctaatcta gggtgaaaaa acctacttat gggctttata cattgaagat
                                                                      480
gcatccctta gttgaatatt atgacagaaa aatgttatca atgctgacat taaaaactgt
                                                                      540
tattatgtgc caattattag gaaattttaa ataatttaac aggataagat taatagttaa
                                                                      600
accgaacact aagaaagaga gtattagcta cttgacgaag aacattgtat attttttgag
                                                                      660
actatgaatt tttataaaat gtcaaataat acaaagcaaa atactactaa aatgagatat
                                                                      720
tataattctc atctttatgg aactgcttag tttcatactc ataacatata taaaataata
                                                                      780
attaagaatt acagaggcca agcatggtgg ctcatgcctt taatcccaag cactctgaga
                                                                      840
ggctgaggag ggcagattg
                                                                      859
<210> 1737
<211> 1516
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1025)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1144)
<223> n equals a,t,g, or c
<400> 1737
gaattcggca cgagaaagaa tgaactgttt atgaaagaaa ccttttgaaa gacagaatat
                                                                       60
ttttgcctgt gggccaaagc tgaggcagga aaacaaaggg ctctttcaaa ggcttagaat
                                                                      120
atgatggagg atggattctg actttccaac tacaaaaata atgatgcttt tagcatcaat
                                                                      180
```

<400> 1739

```
240
acctgcatta ctccagggag ttgtaaatat actttacaga cacaggctgg gcctttccaa
                                                                300
ctttttacct cagtgctctt tgaactcctt aaaggggagt aatgttggcc ccaatttgca
                                                                360
cactgagaaa ctgaggcaga agaaatctaa gcaatttgtc ccatgccacc agataactta
                                                                420
taagtgaagt caagaataga acaaactgaa actgaatgct tccatgacac aggagcatct
                                                                480
ttcattttct gattcattaa ctcttagctc ttgtcaatga attgaggcca gtgtgagtgt
                                                                540
                                                                600
tgacatgtcc atcagaaagt ctgtgttggt ccaggtgaca aagaatctac agcttgtatc
agccagcctg tgcaggttgt tgcagttcct ttgaacaata ttactagcaa aactcatctt
                                                                660
                                                                720
gaaaacaata ttctttcatc ctaacctatt ttgtwcttgc agaaacacta ctgtaaagta
cagatgctcc ttgacttaca atacagttat atcctgacga accatcataa gttgaaaata
                                                                780
tcctagttag aaatatattt tatgaaccta acctattgaa catcataact tagcctcacc
                                                                840
taccttgaat gtgctgagaa catctatatt agcctataat tgaraaaatt aactaacaca
                                                                900
aagcctawtt tattatatgg tgttgaatat ttcatgtaat ttattgaata ctgtatagaa
                                                                960
                                                               1020
agtgaaaaac aaaatagttg catgggtact caaagtatgg ttgctactga atgcgtattg
ctttngcatc gtcatgaagt tgagaaagtc tacgttggaa tctacagctt gtgtaaacca
                                                               1080
gcttgtgcag cttgttgctg ttcctttgaa caatargata ttrgcaraac ttatcttgaa
                                                               1140
aacnagataa accatcacaa attgggtatt gtgtgtatga aattttacat ttgtacattt
                                                               1200
                                                               1260
aaaaaatatc cggtgtttgg ctttttaaaa aaataaatgg tacctaaata gttcttaatt
tccccttatg ggtagtctcc tagctgttaa atgtacattt atttactcat tcatttttt
                                                               1320
atttgacagc tatttgtttt gaatttactt ttggcacagc actgggcttt gtaatgaata
                                                               1380
                                                               1440
ctgtacaaca gatcaaaatc ttatagaaga ttttaataaa gattttataa agattttaat
                                                               1500
aaagattaag totttaagat ttaaaaaaat tttaatttot tttttttt ttttttt
                                                               1516
ttttagctag tctcga
<210> 1738
<211> 508
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (255)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (473)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (502)
<223> n equals a,t,g, or c
<400> 1738
agctggcatg aaatatgttt tctccagttt gctacatagt cctctcttct gatgtttatc
                                                                 60
                                                                120
ttttttttt gactaatatt tgtattggta agaggtgctt tggaatttgc acacatgarg
aaataaagag cttttttcct ctacatttct aatattcagc tgctctctta cctttcttgt
                                                                180
ccaggtattt tgacttttaa attctctagg tggtttctct ttctctttct ctttcttct
                                                                240
300
360
                                                                420
caagtctcac tcttttgccc aggctgaagt gcagtagtgt gatctcagct cactgcaacc
                                                                480
tccatctcct gggttcaagc gattctcctg cctcaggctc tcgagggggg ggnccggtac
                                                                508
ccaattcgcc cttaataatg antcggaa
<210> 1739
<211> 311
<212> DNA
<213> Homo sapiens
```

```
ggcacgaggg ctcccacagc cctcctgatg aagtcattgc tgctcgccat agccttccag
                                                                    60
aaacttettg geteeceeca ecceattete caaceteace tetttgeate ectecatece
                                                                   120
tegecectea tagtecaggg atectgaaca cetgtgette eccaaacete teeegettee
                                                                   180
aggeetetge acaegeaget ecetetgett etecageeet teagaaatgg geeagtgaca
                                                                   240
gagetetgtg etteceaeae egtegeetet teeggggtte agaggattea aggeeeeaet
                                                                   300
tcccagtctc c
                                                                   311
<210> 1740
<211> 1338
<212> DNA
<213> Homo sapiens
<400> 1740
gattcggcac gagctgggtt ccaggttccc agggctggct gtgagctact caagggcagg
                                                                    60
gctgtatctc gtttcctgcc atgcctttgt gcctagcaca gtgccaagca cacggcaggt
                                                                   120
atctgaacag tgtgggaaga gaaaaggtgg aggggagatg gttgggggta gactgtgaga
                                                                   180
gtggaggtgg ctcaacgctc ccaccccaa cctcacacac agcaccctta gcccaggcac
                                                                   240
tgatcccagg agtctaagaa gctgattaga actgcccatg gctgcagcta acctcggaac
                                                                   300
tatgccccac cacctgctgt crtctccctg cccccactcc tacttccctc tctcctccct
                                                                   360
ccccaggggt ccggggcagc ctcccctcc cccaccccat ggtgagaaat cccaaagact
                                                                   420
480
ctttgcctca cattcaatct ctccctcccc cagcctggtg aatccaaact gaaaaaaaa
                                                                   540
aaaaaaaaaa aaggcccaca caacagcttc aacagtgaaa aataaccaat ttaaggagta
                                                                   600
atcgctgctg taatgattgt ctaagccctg agtcactgca gaaaatcgga ctgaagctct
                                                                   660
gggactccca ggctccctga gagtgtcata tgggtttttg tttttgtttt tttaaatatc
                                                                   720
caggacctca gtgtctccat ctgtaaaatg gaaggaatat tatcagccca aaggaactga
                                                                   780
ttgttaatct cctgattttc cctggggctg ggaatcagag gttaaggtgg tccacacagt
                                                                   840
tggcttggga atcaccacgg gacacattct tctaccacag gacccatggg agaaatgtgg
                                                                   900
tgcctggcag gtgctgagag actcacagct tcgagggtct ctgggaaagg tttctagaga
                                                                   960
ttgtggtgtt taactgagct gggaaggatg aatgggtgaa tgagagctat gggaagtgat
                                                                  1020
ggagtgatgg aaagtcagct ctggaagaga ctagacacct catcttgccc tatgctctca
                                                                  1080
ttttacagat gaagaaactg aggcctgaag ggcttcagga actgctcaaa gtcattagtg
                                                                  1140
gcagagccca aattagtggc agagcccaca ttagaaaaca ggtgccttga ctcctgctcc
                                                                  1200
agtgctcttt ctttctttct ttctttttt agacggaatc ttgctctgct gcccaggctg
                                                                  1260
gagtgcagtg gcatgatctc agctcactgc agtctctgcc tcmtgggttc aagtgattct
                                                                  1320
cctgcctcag cctctcga
                                                                  1338
<210> 1741
<211> 1736
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (369)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (605)
<223> n equals a,t,g, or c
<400> 1741
60
ctcagcctcc ctgcttctgc tgggcatccc tctgctcagg ggagcatctt gaggctatac
                                                                   120
aggtctcagg tgcagctggc agcaaagaga cataggagga ggtggttgaa cccacctgc
                                                                  180
aatgtccaag gtccaggtta aaccctgaga gtgggtgagt gtgtctggtc ctgtgactca
                                                                  240
gtttccctac ctgtaaaaca gagcttcaac gagatgaacg atagtcctga gcataacagt
                                                                  300
ccacaggggc ccacgagccg cttctgcgtc ccaagccctc gtttctgcat ccwgtctyca
                                                                  360
tetgeteane tetgaatgaa eecatggtee eetggaggae takgtgaaga aataceetaa
                                                                  420
acacctcccc aggcatcgag ctcatgcctc cagcacaagg cctggggctg taacgcaggg
                                                                  480
```

<210> 1744

```
agctgggctc cagcttgaat gctgctctty ctttctttct tttttttaa aaggggtgaa
                                                                    540
atccacataa cacaaagtga accactttaa agtgaacact ttcatggcgt gtggtacatt
                                                                    600
                                                                    660
cacanattca tggatgctcg tctcctatac ctgagctata tcctgcctgt cacaattcca
                                                                    720
taggaagtaa aaccagccac tttctgtaaa tgggatctta agcagaactc taacactgtg
cacaraaagt gtgactgtgc tgggttcgag gaaracaggg tctggtctgt gtccccagcc
                                                                    780
gaatctcatg acaaattgta attcccarcg tgaagggarg gamctggtgg gaartgatgg
                                                                    840
gatcatgggg aargattttc ccctcgctgt tctcatgata gggagtgcgt tctcgtgaga
                                                                    900
                                                                    960
tctggtggtt taaaattgtg tagtgettee eeteetttet etgtetetet eeegetegae
                                                                    1020
cgtgtgaggg ccttgcccac tcccccttca cctgcgtcat gattgtaagt ttcctgaggc
ctccccagcc acgcytcctg caaagcctgt gaactttgag ccaattaaac ctcttttctt
                                                                    1080
tataaactac gcagtctcaa ctaaagaaag gcagttcttt atagcaatgt gagaarggac
                                                                    1140
taatacggag aagggccacc tgtcctttca aaggccccgc ccaggaccct ttgaaaccag
                                                                    1200
agegtecagg tgeeeteteg gatgttttet cateteggga gteetgtggt tttaaegtte
                                                                    1260
ttttacgatc acacctctag agagtgctga ttccctggat accacaggac ctccctgagg
                                                                    1320
                                                                    1380
tgtccaggac agagcaagct tagatattag gcagaggttc taggagctgt gcacccttgc
                                                                    1440
acccctggac cagagagtct gggtgaggaa gtgggggcgg gatgtggggc ctgatctctg
                                                                    1500
ggctgctgac cacagaaagg gctcacaccg ggaagtggac ttgggcctgt ccagggcagt
                                                                    1560
tccggggcag aaatgggagc tggagatgtt tgtggctgtt cccgtgagga tgctccagcc
ccaggaggcc gtcggggaga ggccggtgct gtgtggaacc acacatgtgt gagccagtca
                                                                    1620
                                                                    1680
ggagactgct gtgtcagtca ggaaaggcca acacagtgca ctgtcctcac actgggagga
                                                                    1736
ccggcttccc accccactcc agggctttgt ggtaagcctg acgcacccca ctcgta
<210> 1742
<211> 522
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (436)
<223> n equals a,t,g, or c
<400> 1742
                                                                     60
tgtaattgga aatatcaact catgttgaat gtgtttgctg tacctgttta tgttttattg
                                                                    120
attattttct gggagaggag ggctaaaaaa tacactgcag agaatagaca atttatgcta
taaatataat tgcaaatgcc atgaattaaa actgctgctg gatagttcaa aacaatggtg
                                                                    180
ttttgagaac ctgaccaaag gcagtctttc caagaatcag tcccgtattc atcaagtgca
                                                                    240
ctcatagaga ggcagggctc cgttcttaat tcctccctaa atatctgatt cagacagaga
                                                                    300
aaatqtqtct catcttcctt ccccattctc agttcctatc ccttgtcaac gcaaacacaa
                                                                    360
420
tttgatggag tctcantctg tcgcccaggc tggagtgcag tggcgcagtc tcggctcact
                                                                    480
                                                                    522
gcaacctcca cctcctgggt tcaacctctc ctgcctcagc ct
<210> 1743
<211> 591
<212> DNA
<213> Homo sapiens
<400> 1743
ggcacgagaa agaactatta ttactcccgt tttacagatg aagagacaga ggcacagaga
                                                                     60
ggtcaagcaa gcggcccaag gtcacagggc taagacagaa cagagccaag gtctgaggcc
                                                                    120
aggcaaccgg actccagcat tctaaacctc catgcagtcc tgcctctctc tcttcagctc
                                                                    180
                                                                    240
atacccaggt aagcaggcca agctcaaaaa tagcagccaa cgccattttc aaactcatgc
                                                                    300
tttatgaatc ttaaaatact tacttgtttc ctagtttctt acacctttcc atcatctcgg
                                                                    360
tcagcagagc ctattatgtt aaaaataata ataattaaaa aatcaggttg gaggagctaa
                                                                    420
agtaacattt ctaagagatt tccaaagtcg aactctaaaa tgaatgtagc cacatgtcca
ttaagataat teteagtgte tggtagggat ggggaggett ggggagaaaa aaatteaett
                                                                    480
                                                                    540
tcattgcatt tagtgtaata aatagaagga gggggctggg tacagtggct cgcacctata
                                                                    591
attctagcat tttggtagac cgaggcaggt ggatcacttg aggtcaagag c
```

```
<211> 610
<212> DNA
<213> Homo sapiens
<400> 1744
ggcacgaggg aggaaagagg gtggaatctg gacagtatga aggatttgta ttgtacctgt
                                                                       60
aatgtttgat gtctgaagct gggtggtggg catggctgtt tgttattctc catccttttg
                                                                      120
                                                                      180
gtatgcctga tacatttcat aataatttta aaaaggacaa gactactgca gagaaatgca
                                                                      240
tagagtgagc tctgtttggg tttttaaaat gattcctaca tctatgcttg cagatgtaag
caccagccct ggaaaacatt gcaagggatt cttagtaggc ccaagctttg ggaaagggcc
                                                                      300
aagggggctg gggagttgat taggagggga tacatgcttt ttcctgctgc cttttgaatt
                                                                      360
ttgtaccaca cgtagtatta cttattaatt aaaaaataat ctgaactagc caggcgtggt
                                                                      420
ggcacatacc tagtctcagt tacttggaag gctgaggcag gaggatcact tgagcccagg
                                                                      480
                                                                      540
tggttgcggc cagcctgggc aacatagtga gaccctgtct ctttagaaaa aacaggccag
gcatggtggc tcacacctgt aatcccagca ctttgggagg ctgaggtggg tggatcacct
                                                                      600
                                                                      610
gaggtcggga
<210> 1745
<211> 695
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (2)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (25)
<223> n equals a,t,g, or c
<400> 1745
                                                                       60
tngccgccg ctctagaact agtgnacccc cgggctgcag gaattcggca cgagcccacc
                                                                      120
tcagcctccc tagtagttgg gattacaggt gctcaccacc acactcatct aatttttgta
                                                                      180
tttttagttg gccatgttgg ccaggettct cttgaactcc tgaccctcaa atgttctgcc
                                                                      240
caccttggcc tctcaaagtg ctgggattac aggtgtgagc caccgcacca ggcctaaaat
taaatggatt ccggttgcag gtctttggct caggctgttt tccctgatgt ttctgcaggt
                                                                      300
                                                                      360
caqttactta tggactgatg tttctgcagg tcagttactt atgtggttgt gcagatggcc
aaccacaqtq qccqqttact tttctcaggg cacctgcctt ctagaaatgt atcctctctc
                                                                      420
                                                                      480
ctctccttt tcctctttct gtcagagaat agcaggggtt gtggaggaaa gctgaattct
                                                                      540
aaattaqtca tttcqataat taataaggct agctagaggt ttgatgagaa aaaaattgct
gctttttttt gtaagtgtaa tgtggttaga tataaagtat ccaaaattta gacagatctc
                                                                      600
aaaatccaaa attttatttt tccctcaaag ccatgcttaa gtttactcag aataaccaca
                                                                      660
                                                                      695
gcatttttct gaggctctgc aaataccttc tcgag
<210> 1746
<211> 568
<212> DNA
<213> Homo sapiens
<400> 1746
gcacatagtg attttctcct gtgctttgtc tccagggaca ttggctgctg tcttctgacc
                                                                       60
                                                                      120
caccetytyt ggetttggeg teteetgtga cetaccagta tgggtettgg ceteateetg
cctctttgtc tttctggccc accaccaca gcttgaatct caggctccaa cagttgcctg
                                                                      180
accccagat totgatgaca gootacotac tigttottca ggoodcacc agactcactg
                                                                      240
                                                                      300
cccagacaca ccacacagga gaacatgaaa gggtgaatga atctttcatc atttgatgac
                                                                      360
caagttggca ttcttttaca ttccagccac cagaggaagg tgtattttaa cacaattgcc
ctcacatcct ccttaacagg atttacataa gtttattaac acatatgttt ctacaaaatc
                                                                      420
                                                                      480
aagttttgag aaccattttt atacactgat ctgggacatt ttggggatat gaaattaact
                                                                      540
ttagcacaca cagcaagaag aaaaccgaac aacaaattct acaaacacca aatttgctgt
```

| gaaatttaca | tttcagattc | tcaagaaa | | | | 568 |
|--------------------------|------------|--------------------------|-------------|-------------|-------------|-------------|
| <210> 1747 | | | | | | |
| <211> 468 | | | | | | |
| <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| <400> 1747 | | | ~~~~~~~~ | aagataaga | cadacccaca | 60 |
| ggcacgagag | geeetggggt | ggcggggaga tttatttcac | aagagettet | caataactaa | cagacccaca | 120 |
| gggctgaggc | tagaatccaa | ctcggcccc | acaaccttaa | tgtcctccag | cacagccatg | 180 |
| tcccacgaga | aggtcaggag | ggcagagggc | acctgcggta | ggggtaggcc | gtcactctga | 240 |
| gaccgagagt | cggcccttgc | cgcggcaggg | aactcagcgg | gcaacctggg | cgcggggatg | 300 |
| ccccggcctg | gaagccatct | cagctggtgg | aggctgtggc | tcgcacccag | gcctcctgcc | 360 |
| ctgctcctcc | gggactccag | gacctaagcc | taaacctact | gcactagtaa | cgcacgtcac | 420 |
| cgctcccatt | tgatggggaa | actgaggcgt | ggagtagtta | tgaacttg | | 468 |
| <210> 1748 | , | | | | | |
| <211> 1138 | | | | | | |
| <212> DNA <213> Homo | caniens | | | | | |
| | sapiens | | | | | |
| <400> 1748 | | | | | anathanatan | 60 |
| ggcacgagcg | agtattgagt | tcattaatgg | ctattatcat | cgtgtttaat | ttcccatcca | 120 |
| ttttaacttt | cttcattatc | ccctcctctt gcgagaaata | traataarta | tgagatcata | actcaacage | 180 |
| ttcaattctc | tactettect | ctgagcaatt | tttcttcttt | tcagactttt | tccttttctt | 240 |
| ttcccttccc | tttttttcat | gttcttcctc | tgcaataaga | aagaatttag | aaaaaggaat | 300 |
| gtaaatacac | catttggaaa | aagtagaaat | taacttcggt | tataagaaga | cttgggtgct | 360 |
| cactaatgta | acttttcctg | ttggctagga | aagggattac | acctagcgaa | aggagacaga | 420 |
| gcaaggatga | gaggacattt | gcccactgag | aagagactag | tgaacactcg | tttcttccta | 480 540 |
| ggtaatgttt | tggttcagta | tcgcaaaggc | taatgacatc | ttttgtaagg | tgtgaactgc | 600 |
| ctctgaacta | agaggcatta | agatgatgag gtcacatata | aagagagaga | acctataga | aagctaaata | 660 |
| ctcaagacaa | cttgtgatag | attttgggag | gccactgtcc | acagactggg | atccataagc | 720 |
| cttaggggca | ttgtcacttg | gtctggtaac | ccatctcagt | ctgttctggg | gtccctggac | 780 |
| ctactgtgtg | agatatcaac | ataccatttc | ttaggcacta | gttaatattt | cctgaaataa | 840 |
| atatgttaaa | cagtccaggt | gcaatggatc | atgcctgtaa | ttccagcact | ttgggaggct | 900 |
| gaggtgggca | gattacttga | acccaggagt | tcaaaaccag | cccggccaac | agggcgaaat | 960 1020 |
| cccatctcta | ctaaaaatta | aaaaattagt | tassataa | aggegegeetg | tactaccayc | 1020 |
| tactcagggg | ccactotact | gataattgct ccagcctcga | caaagagaga | ctttgtcaaa | aaaaaaaa | 1138 |
| | ccaccgcacc | ccagoooga | Juangagaga | | | |
| <210> 1749 | | | | | | • |
| <211> 898 <212> DNA | | | | | | |
| <213> Homo | sapiens | | | | | |
| | | | | | | |
| <400> 1749 | aggettte. | cttcctggcc | taataaaata | ttccaacato | cagtcattct | 60 |
| ggcacgagtt | ttctccacat | gtcttctcta | gactgaggag | ccaatatatt | gctatgaagc | 120 |
| tctaactaac | tgggtaatgc | acttccttgt | atttgctctt | cctcgttcct | tgtctcatgt | 180 |
| ctccttttcc | ctgggattct | accctacact | gaagtaatag | cacacaaatt | tttgtctcaa | 240 |
| gttctgttgt | ctagggaagc | caggctaaga | catggttcaa | tgggtgtcct | tagaaagcag | 300 |
| acctccaaaa | gagaactttg | ggtctccacc | gatggtggca | aactgggtgg | cccggattcc | 360 430 |
| tggcatgcag | tgatagtaca | attgccaata | tgttatgtgg | tataggcaga | aggcaaggta | 420 480 |
| ttggcatatc | aagtggctgt | gtacttgatc ttgatggctt | agtacagagg | raaaaannca | taacagaactc | 540 |
| gratiacata addaaadcta | attocccact | taaaatatgc | tgtgaaaagtc | agagggcctc | tatggtagcc | 600 |
| ttccaaatcc | tcttatctac | tgcagctgca | gggcaaatga | tggaggaaga | aaatcatgtt | 660 |
| cagggtttca | tggtataggg | ttgcaaacct | acaaaggaga | aaaaattcac | agccttaaaa | 720 |
| | | | | | | |

| tgtctcctgt gtcaatgtga aggctttgat agggaaagag taggaacctg agggtggacatt tgagtggaca aatctaataa tctgaatgtc caaatttccc tg | gcctctctg 840 |
|---|---|
| <210> 1750 <211> 764 <212> DNA <213> Homo sapiens | |
| <400> 1750 ggcacgaggt cctaaggtga gaaggagggc cactagcata aaaacaactt gatgettcacaa gccaataaat tctaataaca aaaggcaaag gaaaaagttc cctaaggattt tccaaagcct aatgctcatt ttttatatcc ttctttgtat gatgatettcc tttaccagac acaaaaaagg gcttaattaa aaatttgaaa tgagatataaa ctataaataa atacatttgc ctttcaaatt tttagaacat taattcaaatt tttttatttg agatgaaagg cgatttaagc taattttcat tattattatta ttattttgca gtgtattagt taactactgt tatataacaa a | ctatagaag 120 gtcaaaggt 180 caaatttta 240 atcctagtt 300 ggatcattt 360 |
| aacttaatgg ctcacagcat caaaaatata ttagctcata gtttttgtgg g tgggtgctgt atgtctagtg ctcagggtcc ttcacaagat tgccatcaag t gggatgtagt catctgaagg ctcacgtgag tgagtatcaa attccaagct c gttcaagttt ttgacatctg ctggctggag accacttgtt tgccttgtgg g agagtagttt acaacatggc aacagcctct ctagttagta tgagcaagcc c atttgccata ttctaattat tagatacaaa tcaataggct cgag | ttaggaatc 480 tgtcgactg 540 actcacttt 600 cctctccac 660 |
| <210> 1751 <211> 417 <212> DNA <213> Homo sapiens <220> <221> SITE <222> (386) | |
| <223> n equals a,t,g, or c <400> 1751 ggcacgaggg aaacttaccc aggtttctat aaactagact gcaatctgca c ccagcgctag gacctgctgt acattagtgg ggaaccagtg gattgccaac t gcctccctcc actcccacct ccttcacccc ctgctgcccc aagttgggca c ttccctaatc aaacaagaaa ggctccatat ctccacccaa ctgcaaatag t ccagcgcctg ggcaggatta gattgaacaa cactgttttg ccccctcttg g agaatttttg ctctggggac aattgactcc acagagccaa gggcattcca t tgtyaatttc tctcgagggg gggccngtaa ccaattggcc tatagtgaat c | accgcatgtg 120 actcggccat 180 accttgagct 240 atcattttcc 300 atggttgcc 360 |
| <210> 1752 <211> 817 <212> DNA <213> Homo sapiens | |
| <220> <221> SITE | |
| <222> (4) <223> n equals a,t,g, or c | |
| | |

```
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (683)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (685)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (728)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (811)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (814)
<223> n equals a,t,g, or c
<400> 1752
                                                                        60
atantgnatc actcattgga acattagctg gagctccacc gcggtggcgg ccgctctaga
actagtggat cccccgggct gcaggaattc ggcacgagct cgtgccgaat tcggcacgag
                                                                       120
aaattcatgg gagtgggatt attaaataga ataatatgaa caattgtatg gcttatgttt
                                                                       180
gccttattgt attcccaaag agctgtaaca ttttatagca tcaccacttg ggcaggggta
                                                                       240
                                                                       300
ttacctgttg ttgctaattt agtaagtaga agagagagat caaagtttct ctaatttgtg
tttgtgtaat ttatctgtat actttcttca tttatataaa taaatgtctt cactttggga
                                                                       360
ggctgaggcg ggcagatcac ctgaggtcag gagttcgaga caagcctggc caacatggta
                                                                       420
                                                                       480
aaaccccgtc cctactaaaa atacaaaaat tagttggatg tggtggctca catctgtagt
cccagctact agggaggctg aggcactaga atcacttgaa cccgggaggc ggaggttgcg
                                                                       540
gtgagctgag ttcacagcct gggcgacaag agttaaactc catctcaaaa aaaaaaaaan
                                                                       600
aaaaaaactc gaggggggc ccggtaccca attcgcccta tagtgagtcg tattacaatt
                                                                       660
cactggccgc gttttacaac gtngngactg ggaaaaccct ggcgtaccca acttaatcgc
                                                                       720
                                                                       780
cttgcagnac atcccctttc gccagctggc gtaatagcga aaaggcccgg accgatcggc
                                                                       817
ctttccaaca gtgccaacct gaatggcgaa nggnaaa
<210> 1753
<211> 1653
<212> DNA
<213> Homo sapiens
<220>
<221> SITE
<222> (1111)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1613)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1625)
```

```
<223> n equals a,t,g,
<220>
<221> SITE
<222> (1631)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1637)
<223> n equals a,t,g, or c
<220>
<221> SITE
<222> (1651)
<223> n equals a,t,g, or c
<400> 1753
gcaaccttgc agagtcagaa tcctgatcag cagttttgac cagcacatca agagtggctt
                                                                       60
tacctcccag gcattgatcc agcattagtc aagctacaag acactgatgt agaaaaccat
                                                                       120
aatgtcagtt tactaatgta gaataagaaa taaaatctca gaagacctga gctctcctgt
                                                                       180
cagcatgact tgcacttgta cttttccttt ttgtagagaa gctaaattat aatcagaaag
                                                                       240
ttgttttggt gagcttggaa tcagaaaata ggagtttaag tcatctgttc aacatgcagc
                                                                       300
tttcctcagc tgtgatagct ttttcctgct gtccagtctt catgtggagc ctggtcaata
                                                                       360
gcaccagaat tctaagtctg ctggccaagg tgctgcctyc tgcagagaga gaaagcccat
                                                                       420
caaagttgac ttcagtgact cccccttcac tcacccctca tcttycacgg gcaaccaact
                                                                       480
ycctttttga ttgacacatc atttctttac atacattaat gccttccata ttaccacaga
                                                                       540
gagtttggta gactggaaat cattttattt ctttgatcta cttcatcttt ctctgcattg
                                                                       600
agcetttgcg tactaattta tagetatttt etcacaggat agtetattte cattatatet
                                                                       660
atattttcta gtggtccttt gcgtttgcct cttttccaga ctgtataggg catggtgcca
                                                                       720
ggcacagttt atttgtttta ttctatatgc tgatagtatc atcttttcca tctttagatg
                                                                       780
 ttttatctca ttcagagtga gaggggcact tggtcagtcc tttttgcatc tcaatagttg
                                                                       840
 atcctctttt gattaaaaaa tatttaattt ctaataatgt gtgttagagt gaaaataaca
                                                                       900
 ggaattatta ggcccagtca agactaacag ttcttgactc atagttccaa atcacagttc
                                                                       960
 caagatttcc ttaacctttc tgatcctcac ttccctccca aaaaagtaag aatggctata
                                                                      1020
 attacctacc tcatggaaat tataaggctt cagcaagatt aaatgtactc atttatttaa
                                                                      1080
 catgcatagt aagaactata aatgttaatt nattcttact tacattarga tactgactta
                                                                      1140
 tgaaacagag attaaacaca ttctgcaaaa ggactggtat tgacaggctt tgattctaat
                                                                      1200
 agctcaaaag ataggccatg gcttgctaga gaaaatgaaa ggatactcaa ggctcattag
                                                                      1260
 attaaaaggc tgctaatgtt ctctaagctg taagtagatt tttgcccaca tttatgaagg
                                                                      1320
 ttgatttcta atcagattag aaatggcata ggctggtggc gtcatctcag agctgccaca
                                                                      1380
 gcattctcag gagactcagc catatcatgt tgggttgctc taagaacaca cagagacctt
                                                                      1440
 tatgcttttt cacaaaagca tactctttcc ctggagtgtg taactctatg tgttgacctt
                                                                      1500
 tagtgggata agttcttaca atggagctat tctgggtaca aaacatcact actctgtgag
                                                                      1560
 attttggaag ataacactgt ttgctgattt tacaagcccg ctcggggggg ggnccggaac
                                                                      1620
                                                                      1653
 ccggngcggt ncccgtncct ttccccccc ncg
 <210> 1754
 <211> 713
 <212> DNA
 <213> Homo sapiens
 <400> 1754
 tgcaggaatt cggcacgagg agactcttaa cccccgcaaa attatccagg ttaaaaacat
                                                                         60
 acgtgagctt cagaaagggt gaacatagcc atggctgaga atcgttgtgg attatcatga
                                                                        120
 taggaaattg acatgcttat gggtgttctg tcctttgggg ttgatgtcag ggagccaagt
                                                                        180
 ggttgcacta tttctgctgt gtgtccgaat ttctaaagta atatccgtgt attgtttgga
                                                                        240
 gagcggactt ttttgcttta ctcctacttt tacagaaaag aattttttt ctcaagcaac
                                                                        300
 aaaacatttg gtctctggtg tcaaagagga ctttattata ttagaattat aaagctttag
                                                                        360
 ttaggaataa gtgttggaca ttattaaatc aatttactgc aggctgggca tggtggctca
                                                                        420
 cgcctgtaat cccagccctt tgggaggcca agactagtag tctccaattc cattccatca
                                                                        480
```